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SMITHSONIAN INSTITUTION
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A STRUCTURAL AND LEXICAL COMPARISON OF THE TUNICA, CHITIMACHA, AND ATAKAPA LANGUAGES

BY

JOHN R. SWANTON

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LETTER OF TRANSMITTAL

Smithsonian Institution,
Bureau of American Ethnology,
Washington, D. C., June 11, 1918.

Sir: I have the honor to transmit the accompanying manuscript, entitled "A Structural and Lexical Comparison of the Tunica, Chitimacha, and Atakapa Languages," by John R. Swanton, with the recommendation that it be published, subject to your approval, as Bulletin 68 of this Bureau.

Very respectfully,

J. Walter Fewkes,
Chief.

Dr. Charles D. Walcott,
Secretary of the Smithsonian Institution.

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A STRUCTURAL AND LEXICAL COMPARISON OF THE TUNICA, CHITIMACHA, AND ATAKAPA LANGUAGES

By John R. Swanton

INTRODUCTION

THE languages to be discussed in this paper were spoken within historic times in territory now incorporated into the States of Mississippi, Louisiana, and Texas. The principal facts preserved to us regarding their history and ethnology have been made the subject of a special paper by the writer,[1] to which the reader is referred for detailed information on those matters, the main points of which will here be dismissed in a few words.

Tunica seems to have been spoken by five historic tribes—the Tunica, Yazoo, Koroa, Tiou, and Grigra. All of our linguistic material comes from the first of these, and it is known in some degree at the present day by perhaps half a dozen individuals living on a small reservation just south of Marksville, La. Yazoo and Koroa are classed with these on the grounds of historical association and a few statements of early writers, especially Du Pratz's affirmation that Yazoo and Koroa shared with Tunica the peculiarity of employing a true *r* which the surrounding peoples could not even pronounce.[2] The same writer includes Tiou and Grigra in this statement, and it is practically the only evidence upon which Grigra is placed in the Tunica group. In the case of Tiou, however, we have, besides, a direct declaration of the French officer, d'Artaguette, who affirms that in both customs and language the Tiou were identical with the Tunica.[3]

When we first hear of them the Grigra had taken refuge with the powerful Natchez nation, where they formed one town, and in Du Pratz's time the Tiou had done the same thing. Nevertheless we have good evidence, partly from Du Pratz himself, that the migration of the Tiou had happened at a very late period, and indeed one or two cartographers place them in their ancient territory upon the Yazoo River. The remaining tribes also lived upon, or at least spent most of their time upon, the Yazoo within historic times,

[1] Bull. 43, Bur. Amer. Ethn., pp. 26-27, Washington, 1911.
[2] Du Pratz, Histoire de la Louisiane, vol. ii, pp. 222–226, 1758.
[3] Mereness, Newton D., *ed.* Travels in the American Colonies, p. 46, New York, 1916.

their towns being close to its mouth. Tonti says that the Yazoo were "masters of the soil," by which we are probably to understand that they were the original occupants of that country.[1] The Koroa were more inclined to wander to the banks of the Mississippi and the regions westward of it as far as the Ouachita, where their more ancient seat appears to have been. Finally the name "Tunica old fields" clung to a terrain near the Mississippi River in the southern part of the county which still preserves the name of the Tunica tribe, so that there is reason to believe that their former home was farther north than that of any of the others. Indeed there is some slight evidence preserved in the De Soto chronicles that, if not the Tunica, at least peoples of Tunica speech, extended up to and even beyond the Arkansas, and that the Pacaha tribe which plays such a prominent part in the accounts of his expedition was in reality of Tunican stock. The part played by Tunican peoples in the aboriginal history of the lower Mississippi Valley would thus appear to have been very great and to render a knowledge of their position and affinities of unusual importance.

So far as we know with any degree of certainty there were but three tribes belonging to the Chitimachan group—the Chitimacha, Washa, and Chawasha. The first of these lived about Grand Lake and on the lower parts of Bayou Teche and the Atchafalaya, and from their name for the last of these, Sheti, they probably received their own. The Washa and Chawasha, who always lived near each other and remained on terms of intimacy from the first we hear of them until their disappearance, were upon Bayou La Fourche and hunted about in all of the territory between that bayou and the Mississippi, the mouth of which was in their lands. On very slight evidence I classified these in an earlier bulletin as of Muskhogean affinities,[2] but a manuscript sketch of the Louisiana tribes by Bienville which has since been brought to my attention states that they spoke the same language as the Chitimacha.[3] Not a word of the speech of either has, however, been preserved, all of our linguistic material being derived from the principal tribe.

The Atakapan group had a wider historic range than either of the others. It consisted of a great number of small bands occupying the coast of the Gulf of Mexico from Vermillion Bay to Galveston Bay, the whole of which latter it included, and extending up the Trinity River on both sides to a point beyond Bidai Creek. The principal bands of Atakapa properly so called were on Vermillion Bayou, Mermentou River, Calcasieu River, and the lower Sabine and Neches. In the extreme northeast were the Opelousa, not far from

[1] French, Hist. Colls. La., Pt. I, pp. 82–83, 1846.
[2] Bull. 43, Bur. Amer. Ethn., pp. 26–27, Washington, 1911.
[3] Int. Journ. Amer. Linguistics, vol. i, no. 1, p. 49, 1917.

the modern town of that name. Their position is not beyond doubt, but an Atakapan connection is the most probable. The same might have been said until recently for the bands about Galveston Bay and along Trinity River, who were usually called Akokisa by the Spaniards. However, a newly discovered vocabulary in an old French manuscript has placed their position beyond doubt.[1] To these the researches of Prof. H. E. Bolton among Spanish documents have enabled us to add the Bidai of the middle Trinity and the territory immediately to the westward of that river, and two tribes less well known, the Deadose and Patiri, which probably lived entirely west of the Trinity.[2]

In the main the culture of all of these peoples did not differ materially, but that of the Tunica and Chitimacha partook of the higher or at any rate more complicated civilization of the lower Mississippi, while the Atakapa were on a much lower level, measured by our ordinary standards. The Tunica peoples had special religious houses or temples set on mounds like the other lower Mississippi tribes, and they were probably organized into exogamous clans, although of that there is no proof other than indications embodied in the terms of relationship recorded at a late date. The Chitimacha also had special religious houses and a cult which seems to have resembled in general that of the Choctaw. If the testimony of the survivors may be relied upon they also had totemic clans with matrilineal descent. The Atakapan peoples, however, seem to have been divided into a great number of small bands having little coherence, either inside or with one another. There is not the slightest evidence that they had clans or gentes and the terms of relationship preserved are such as are encountered among loosely organized peoples without artificial exogamous groups. Like the Chitimacha, their principal reliance for food was upon fish and shellfish. While they seem to have raised some corn, they cultivated the ground far less than either the Tunica or the Chitimacha. Their cultural allies were the Karankawa, Tonkawa, and other peoples of central and southern Texas lying west of them.

For our knowledge of the languages of these three groups of tribes we are almost entirely indebted to the indefatigable labors of Dr. A. S. Gatschet, of the Bureau of American Ethnology, guided by Maj. J. W. Powell, Director of that Bureau. This is particularly true of Tunica, of which scarcely a word remains outside of the material collected by Doctor Gatschet in 1886 from an Indian of the Marksville band of Tunica.

While the writer has gone over this with two or three native informants he has found it impossible to improve upon it except in

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[1] See Int. Journ. Amer. Linguistics, vol. i, no. 1, p. 49, 1917.

[2] Article *San Ildefonso*, Handbook Amer. Inds., Bull. 30, Bur. Amer. Ethn., pt. 2, 1910.

details. Gatschet's Atakapa material, collected in 1885 at Lake Charles, La., is even more important, since his principal informant, Louison, according to the testimony of the Atakapa still living, was the last of the tribe who understood the language as it was spoken by the old-time Indians. While the writer has been able to make some emendations it is practically impossible to add anything new. The few individuals still acquainted with Atakapa are scattered about the State of Louisiana, and even beyond its bounds, and do not use it at all in their everyday life. Besides Gatschet's material we have a short vocabulary—the one already mentioned—collected by a French sea captain named Berenger from Indians of the Galveston Bay region, the so-called Akokisa, and a somewhat longer list of words obtained, if not collected, by Martin Duralde, Spanish commandant at the Atakapa post (now Franklin, La.), April 23, 1802. It is important mainly from the fact that it shows that the language of the eastern Atakapa from whom it was secured differed considerably from the language spoken about Lake Charles. Akokisa, on the other hand, to judge by the Berenger vocabulary, differed but slightly from the dialect of Lake Charles, except that it is apparent that in Gatschet's time Atakapa phonetics were considerably broken down. Gatschet's Chitimacha material was collected at Charenton, La., in December, 1881, and January, 1882. It was secured mainly from an old Negro who had lived so long with the Chitimacha as to speak their language fluently. He is admitted by all to have been better versed in Chitimacha tribal lore than the Indians themselves, but the philological value of the record seems to have suffered somewhat. Neither phonetically nor from any other point of view is it on a par with Gatschet's Tunica and Atakapa work. However, the writer has been able to go over this with considerable care with the help of Benjamin Paul, chief of the Chitimacha remnant, make many corrections, and add some texts and other material of considerable importance. This is the only one of the three languages under discussion to which the writer can claim to have contributed greatly. The only other record of Chitimacha consists of a vocabulary obtained by Martin Duralde at the time he secured the Atakapa vocabulary already referred to. Gatschet states that this was originally recorded by a man named Murray. Like the corresponding Atakapa vocabulary, it has been extensively copied, notably in the comparative vocabularies in the Transactions of the American Antiquarian Society, volume II, pages 307–367, and in the Transactions of the American Ethnological Society, volume II, pages 95–97. As it was also obtained from the Charenton Chitimacha no dialectic difference is exhibited in it and it is of comparatively slight value.

PHONETICS

In this discussion the phonetics must be regarded merely as a means to an end. Of course nothing was to have been expected in the line of phonetic exactness from any writer earlier than Gatschet, and Gatschet's system was by no means adequate to express the sounds which American languages contain. There is reason to believe, however, that even in his time the phonetics of the three varieties of speech under consideration had broken down very considerably, and a further lapse of 30 years has not improved them. Atakapa and Tunica are particularly disorganized; Chitimacha is preserved somewhat better, but it is not possible to furnish a satisfactory detailed table of phonetics. We have here only certain approximations.

The system adopted is based, so far as possible, on the simpler system for the "phonetic transcription of Indian languages" contained in the report of the committee of the American Anthropological Association—which had the duty of attempting some unification in the work of American philologists—which was published as volume 66, No. 6, of the Smithsonian Miscellaneous Collections. The second method of recording vowels has been adopted: *a* as in English father, *ä* as in fare, *ȧ* as in final, *ă* as in hat, *ē* as *a* in fate, *e* as in met, *ī* as in pique, *i* as in pin, *ō* as in note, *o* almost as in not, *ū* as in rule, *u* as in put. In the few cases where nasalization of vowels occurs it is indicated by a hook placed beneath, ∠ . The consonants are so poorly distinguished that most of the signs will be sufficiently described by saying that they are to be pronounced nearly like the hard English sounds represented by the same letters. In Chitimacha, however, we have a series of intermediate stops, for which I have employed the common surd signs *p*, *t*, and *k*, and a series of surd aspirates which I have written *p'*, *t'*, and *k'*. There appear to have been two corresponding affricatives, *tc* and *tc'*, but they are now difficult to distinguish. In addition to these we have *s*, the dental sibilant, *c*, the prepalatal sibilant, and *x*, the palatal spirant. *ñ*—like *ng* in sing—is not found in Tunica but occurs in both Atakapa and Chitimacha. It seems to vary between the nasal sound accompanying a vowel and the sound of *m*. Tunica alone contains a velar *r*, and Atakapa alone a bilabial *f*, of rare occurrence, which Gatschet sometimes writes *v*. In Atakapa we also find an initial *tl*, which probably stands for an original surd *l*, the one generally written *ł*. In the same language *ts* takes the place of *tc*, but in Tunica we find exactly the reverse condition, while Chitimacha contains both. Chitimacha and Tunica employ both *s* and *c*, which appear at present to be somewhat confounded. Atakapa employs only *c*. Besides its use in Chitimacha in the cases already mentioned we sometimes have occasion to use ' to indicate

aspirated sounds in the other languages, and in all three ' is occasionally employed after a glottalized sound. Parentheses separate parts of a stem which there is reason to think are not essential.

In copying Duralde's vocabulary of eastern Atakapa *c* has been substituted for *sh* and *tc* for *ch* or *tch*, and where a vowel has been doubled to indicate quantity the proper form has been used instead, but some devices, although evidently wrong, it has been impossible to correct intelligently and they are allowed to stand. These include in particular combinations of *k* and *g*, such as *kk*, *kg*, *gg*, probably intended for the spirant *x*.

COMPARISON OF THE MATERIAL

In comparing this material it must be remembered that we are dealing with fragments, albeit with large fragments. The fragmentary nature of Atakapa is particularly evident. While the greatest body of material has been preserved from Chitimacha that is also the most complicated language; probably, taking into consideration the relative complexity of the three tongues, that preserved from Tunica is the most nearly adequate.

Comparison of the Phonetics

In my description of the phonetics this ground has practically been covered already. The unsatisfactory state in which we find them prevents anything like a detailed comparison. The differences, however, though striking, are by no means fundamental. The most important of these are the presence of a velar *r* and the absence of *ñ* in Tunica, the absence of an *l* in Chitimacha, and apparent vestiges of *l* and *f* in Atakapa, both of which are wanting in the other two. It is also interesting to observe that in the employment of *s* and the affricatives Chitimacha occupies an intermediate position with reference to the others. In Atakapa we find *c*, *ts*, and *dz*, and in Tunica *c*, *tc*, and *dj*, *ts* and *dz* being wanting and *s* much less employed than *c*. In Chitimacha we have all of these, though there is some uncertainty regarding the exact number and quality of the sounds represented.

Chitimacha is much more consonantic than either Tunica or Atakapa, being marked, indeed, for its strong tendency to consonantic clusters. On the other hand, Tunica is distinguished for the great number of disyllabic stems. On close examination, however, we find that the typical phonetic combination in the principal stems is the consonant-vowel-consonant pattern, the highest proportion being found in Atakapa, the next in Chitimacha, and the lowest in Tunica. Affixes consisting of single sounds are more common in Chitimacha and Atakapa than in Tunica.

Phonetic changes in obedience to harmonic laws appear to be entirely wanting in Chitimacha and Atakapa, and they are inconspicuous in Tunica, the only case of the kind which the writer has discovered so far being a shift from *a* to *ō* or *ū* when the preceding vowel is *ō* or *ū;* as: *sama*, ripe; *samaha*, not ripe; *lapū*, good; *lapūhū*, not good.

The Grammatical Categories

Simple duplication of the verb stem, oftenest the stems of those verbs which may be used as adjectives, occurs in all three languages. Usually the entire syllable is repeated, but in Tunica, where the stems are often disyllabic, the repetition is sometimes confined to the first. Examples: (Tunica) *kōra*, to drink; *kōkōra*, to drink repeatedly or habitually; *kōmū*, roof-shaped; *kōmūkōmū*, roof-shaped objects; *saxku*, one; *saxksaxku*, one here and one there; (Chitimacha) *suk*, to shake; *suksuk*, to shake habitually; *pak'*, flat; *pak'pak'*, flat objects; (Atakapa) *ak*, green; *akak*, very green, or green things; *īts*, to wake, *wi cakītsītsō*, I wake someone repeatedly; *kūts*, red; *kūtskūts*, red things.

In all three languages there are a few verbs with distinct stems in singular and plural, but in Tunica most of these are auxiliaries, while in the other languages the greater number are principal stems. Examples: (Tunica) *a*, *ci*, to go; *a*, *ōn*, to be; *ta*, *in*, to cause; (Chitimacha) *tcu*, *tut'*, to go; *ket'*, *tem*, to fight; (Atakapa) *itōl*, *iwil*, to arrange, to put in order; *kaū*, *pix*, to die.

All three languages make use of both independent personal pronouns and pronominal affixes, but there are differences in each case. In Atakapa and Tunica there are distinct sets of pronominal subjective and objective affixes, and in Atakapa distinct independent pronouns in the first person singular and first person plural, though the independent forms for the second and third persons of both numbers are closely related to the objective forms. In Tunica there are also distinct independent forms, but they are all clearly derived from the objective forms. In Chitimacha there are no objective affixes properly considered, but the independent pronouns take their place and perform their function. As between Chitimacha and Tunica this difference is largely negatived by the fact that the latter language may take an independent pronoun as object and at the same time omit the regular objective affix. In Tunica the objective affixes are used as possessives; in Chitimacha and Atakapa the independent pronouns perform the same function. Any distinction between the three languages which might appear from this is rendered of small value by the very evident relation between the objective affixes and independent pronouns.

In each language the concept "self" in myself, yourself, etc., is represented by a separate word after the appropriate independent pronoun; but Chitimacha and Atakapa also employ reflexive affixes, in the former language almost to the exclusion of the independent

word. Tunica and Atakapa have special affixes indicating reciprocity, but in Chitimacha this function is combined with the reflexive. In Chitimacha and Atakapa the word for "thing" is employed very frequently in such close connection with the verb as to assume the appearance of an affix. This condition is approached in Tunica, but only in a distant manner. Tunica is also marked off from the other two languages by the occurrence of a dual number, and it is almost equally unique in that the pronouns and pronominal affixes indicate sex gender, not merely in the third person but in the second also. So far grammatical gender has not been detected in Atakapa but it occurs in Chitimacha, though I have been unable to identify it in the plural. In Chitimacha the absence of a well-defined group of objective pronominal affixes is in some measure made good by the use of a general objective affix. This seems to occur in Atakapa as well. In Chitimacha we find two suffixes for the third person plural. One of these is an indefinite with passive significance employed in the formation of many nouns. In Tunica the masculine pronominal suffix of the third person plural is used similarly, and it is to be noted that its regular functions appear to be usurped to some extent by its feminine counterpart. There are indications of something of the same kind in Atakapa, particularly in the eastern dialect, where a considerable number of nouns appear to end in the pronominal suffix of the third person plural.

Chitimacha employs a small number of affixes to particularize the state of the action, whether it is directed toward or from some person or object, back toward the place from which it started, is completed, or directed downward. Corresponding in part to this, Tunica uses four locatives, which also occur in independent postpositions, and define whether the motion is in, out, up, or down. Motion toward and away from are denoted by two independent stems, but it is quite possible that these contain prefixes which have become permanently attached by continuous usage. Atakapa has no regular dependent affixes of this character, but uses in the same manner as Tunica some independent postpositions and one prefix taken from a locative nominal suffix to indicate motion upward, motion above but high up, "with," ahead, and perhaps outward.

In Tunica there are half a dozen auxiliaries, employed very much like suffixes, and forming a distinct class. In Chitimacha and Atakapa we do not have such a class but we do find a number of auxiliaries occurring in a similar position with respect to the principal verb, though in these languages, particularly Atakapa, the difference between the use of principal stem plus auxiliary and two stems together in verb composition is not as well marked as the condition we find in Tunica. In Chitimacha and Atakapa the negative suffix is used as an auxiliary; in Tunica it is always a suffix but may be employed with a peculiar negative stem as an independent verb. Tunica

differs from the others in employing the cardinal numerals, the distributive particle, and the adjective "all" as verbal suffixes.

All three languages have continuative, perfect, and noun-forming affixes. Usitative and volitional suffixes are found in Chitimacha and Atakapa. They are wanting in Tunica but it seems possible to detect vestiges of both. All three languages indicate future time in approximately the same manner; Atakapa is peculiar, however, in having two future suffixes instead of one. Chitimacha and Atakapa are furthermore associated by employing a kind of infinitive suffix giving the effect of English "being." While the position of this suffix in the verb complex varies considerably, its functional identity is beyond question. It is largely syntactic in character, being used to subordinate one verb or clause to another. In Atakapa it is placed after the independent pronouns to add emphasis, but in most Chitimacha pronouns it has become combined as an essential element. It is found also in Tunica but its use there is purely syntactic. Chitimacha is notable for two suffixes, auxiliary in character, covering the concepts "to do" and "to cause." In Tunica the former belongs to the class of auxiliaries above mentioned, while the latter is an independent verb, and in Atakapa both are independent or at least semi-independent verbs. Nevertheless, there is a clear vestige in Tunica of the causal auxiliary employed in precisely the same position. In Tunica we find a verbal suffix of interrogative and imperative force, and this is paralleled in Chitimacha by a particle employed in the same position, though it is rather interrogative than imperative. There is a corresponding particle in Atakapa which is purely interrogative. Atakapa is more careful in distinguishing imperatives than either of the other languages. No affix whatever appears in the second person singular, but separate suffixes are used for the first person plural and the second person plural. Chitimacha has a distinct suffix for the first person plural, and employs one also for the second person singular which appears to be used in the second person plural also. Tunica imperatives are sometimes accompanied by the suffix above mentioned; sometimes they appear without any suffix whatsoever other than the appropriate subjective pronominal sign. Past time is clearly marked off from present in Atakapa, distinguished, though not so clearly, in Chitimacha, and still less clearly in Tunica. Two, and occasionally three, principal verb stems may be put in one complex in Tunica by a simple process of juxtaposition. This takes place in the other two languages also, but in a limited number of cases; more often one verb is subordinated to another by means of certain suffixes. Atakapa is peculiar in making frequent use, as first elements of a verb complex, of stems indicating certain general concepts such as to sit, to go, to come, to stand, accompanied by a single suffix. In Tunica and Chitimacha the concept "to be" is expressed in part by an independent stem; in Atakapa it is always

an affix. Cases of nominal incorporation occur in all three languages but verbalization of nouns seems to be peculiar to Atakapa. In fact verbalization of all kinds of elements is accomplished with exceptional freedom in that language.

In Chitimacha certain nouns and demonstratives have a plural suffix, but when an adjective follows the noun and is closely associated with it the suffix is placed after the adjective. In Tunica the independent personal pronouns of the third person are placed directly after a noun to indicate plurality, and the feminine form seems to have been slowly evolving into a plural suffix independent of sex. The distributive particle is sometimes employed instead in the same situation. In Atakapa either *heu*, many, is placed directly after the noun or plurality is indicated by the context, frequently by an accompanying adjective with duplicated stem or the plural suffix employed in verbs and adjectives. Tunica makes use of certain nominal suffixes to mark gender, but they are not essential. Chitimacha and Atakapa, where such distinctions are desired or are not clear from the context, merely place the words for male and female after the noun to be defined. Each of the three languages also employs a small number of locative suffixes with the noun and the significance of these very nearly corresponds. They may be placed after locative adverbs, adjectives, demonstratives, and, in Chitimacha, after verbs.

There are about three corresponding demonstratives in each language, but in Chitimacha the demonstrative system was much more developed, distinguishing plurality and gender, and apparently marking the position of an object as to whether it was erect, recumbent, etc. When employed with nouns adjectively they usually precede; otherwise they follow. In Tunica, however, only one precedes the noun and this has been developed into an article.

In Tunica nearly all of the interrogative and indefinite pronouns and pronominal adverbs are formed by adding certain affixes to a syllable which is clearly to be classed with the demonstratives. In Chitimacha and Atakapa, however, there are several pronouns of this kind which must evidently be placed by themselves.

In none of these languages is there a sharp distinction between verb and adjective, but in Atakapa we see the beginning of such a distinction in the fact that the adjective is sometimes before the noun instead of after it. Unfortunately, the broken-down state of the language does not enable us to tell whether this was a truly aboriginal feature. In Chitimacha almost all adjectives take, or retain, certain verbal suffixes, particularly the noun-forming suffix *–n* or *–ni;* but in Tunica most adjectives are stripped of all affixes, and in Atakapa this is frequently the case. All three numeral systems are decimal. There is more evidence of recent compounding to form these in Tunica than in Chitimacha, and more still in Atakapa, where, in fact, some of the terms are readily interpretable. Atakapa and Tunica

employ suffixes to form numeral adverbs from which ordinals are not clearly marked off. In Tunica numeral adverbs are formed by placing an independent word after the cardinal, but ordinals seem to be given sometimes as identical with cardinals, while sometimes they appear accompanied by the distributive particle. Distributive numerals are formed either by means of this same particle or by duplication of the cardinal. In Chitimacha and Atakapa I find no instances of duplication in numerals. The English numeral adverb series, twofold, threefold, etc., finds its counterpart only in Atakapa, at least if we may rely upon the present material.

All three languages agree closely in their use of adverbs, and in all the most characteristic adverbs are locatives which verge on adjectives and postpositions. Chitimacha is the only one of these languages from which a quotative has been recorded.

Subordination of one clause to another is brought about in Tunica and Chitimacha by means of certain of the verbal suffixes already mentioned, by some of the locative suffixes, and by the use of independent particles. The concepts expressed in English by "when" and "while" are indicated in both by means of a particle placed after the subordinate clause. In the Atakapa material available subordination is usually brought about by a single suffix *–n* or *–in*. In all three languages there are only two or three principal coordinate conjunctions used to connect clauses, but while Tunica employs one of them to unite substantives, Chitimacha and Atakapa make use of entirely distinct connectives for that purpose. Tunica and Chitimacha make a considerable use of introductory connectives adverbial in character, compounded from demonstratives. In the material recorded there are more interjections and exclamatory particles in Tunica than in the other two languages, but this is probably accidental.

Syntax

In the verb complexes of all of these languages suffixes are more numerous than prefixes. In all of them, however, excepting the pronominal and locative affixes, few affixes occur in series. On the contrary, there is a considerable number of single affixes which may occur with any number of the others. The accompanying table gives an idea of the order of elements in the verb complex so that they may be mutually compared. Of course no single verb contains so many affixes, and their relative positions have to be pieced together from the examples available. Some of them, too, suffer displacement at times. For instance, in Tunica the continuative and future suffixes may be placed after instead of before the subjective pronominal suffixes, and in the same language most of the subjectives come before the auxiliaries and not after them, as is usual with principal stems. The placement of some of these depends upon so few examples that it is not beyond question, but the story told is, as a whole, sufficiently accurate.

Order of Elements in Verb Complex

TUNICA

	loc. prefix	pronom. obj.	principal stem	trace of caus. and usitative	numerals, and adjs. indic. "all"	continuative	auxiliaries	perfect	future	neg.	pronom. subj.	remaining tense suffixes	infin. or subordinating suf.	imp. and interrog. suffix			

CHITIMACHA

indep. pronom. obj.	prefix indic. state	gen. obj.	principal stem	plural	aux. of first class	usitative	perfect	aux. of second class (gex)	volitional	future	neg.	aux. of third class (ho)	continuative	pronom. subj.	remaining tense suffixes	infin.	interrog. particle

ATAKAPA

	pronom. obj.	gen. obj. and loc. prefixes	principal stem	plural and usitative	infin.	(future)	continuative	volitional	perfect	pronom. subj.	neg.	remaining tense suffixes and interrog. suffix					

Comparing the three verb plans we find in the main a striking agreement. The principal stem is placed in practically the same position in all. The relative position of the locative and pronominal prefixes differs, it is true, but this is explained by the fact that in Chitimacha the independent pronouns take the place of the pronominal prefixes and naturally come before all, and also by the apparently recent adoption of the Tunica locatives. Still this does not explain why the locative prefixes in Atakapa are placed between the stem and the pronominal prefixes. The loose attachment to the stem exhibited by all of the prefixes prevents us from giving any great weight to this point of divergence. This loose attachment enters to a considerable extent into the question of order among suffixes, and probably accounts for certain anomalies. Thus the negative suffixes in Chitimacha and Atakapa and several of the auxiliaries may be used apart from any principal stem, thus being in effect independent stems themselves. There are also reasons for thinking that the future suffixes in the same languages may have been derived from the verb "to go," with which they are identical in each case, the native idea being similar to that in such English expressions as "I am going to see him." At any rate, all but one of the irregularities which occur hang upon the position of the negative and future suffixes and the auxiliaries in the complex. It is true that the suffix which usually performs the function of a continuative in Chitimacha is much nearer the end of the complex than the suffixes of corresponding meaning in Tunica and Atakapa, but it is practically certain that it represents a late development. There is another suffix genetically connected with the Tunica and Atakapa continuatives.

In Atakapa the perfect suffix agrees neither in form nor position with the Tunica and Chitimacha perfects, but there is some doubt regarding its exact significance, and some reason to think that it may be a broken-down auxiliary, related, perhaps, to the Tunica auxiliary "to do." What appears to be the most remarkable displacement occurs in the case of the so-called infinitive suffix. In Chitimacha it is always at the very end of the verb complex, the interrogative particle not being actually a part of the verb, while in Atakapa it is invariably close to the stem, being preceded by the plural and usitative suffixes only. At the same time the formal identity and identity in meaning and in use in a great many situations place the relationship of the two practically beyond question; that is, of course, if there is any relationship between the two languages to which they belong. Otherwise we must suppose the resemblance to be the result of a most unusual accident. Finally there must be left out of consideration certain suffixes which are not represented in all three languages. Thus Tunica is the only one of them in which the verb takes the numerals and one or two other adjectives as suffixes. On the other hand, it contains, so

far as can be discovered, not a trace of the plural and volitional[1] which are so characteristic of Chitimacha and Tunica, and neither Tunica nor Atakapa has as many series of auxiliaries as Chitimacha.

In the other parts of speech there are, as we have seen, few affixes. The possessive adjectives and demonstrative adjectives go before the noun except in Tunica, where only one demonstrative appears in that position. The plural suffix in Chitimacha and the plural signs in the other two tongues are suffixed, and so are the locative affixes, and the affixes in Tunica which indicate sex gender.

In all three languages the constituents of compound nouns preserve the same order as in English, but adjectives follow the nouns upon which they depend, except occasionally in Atakapa. Locative adverbs or postpositions are, as the latter name implies, placed after the noun. Possessive pronouns are employed in making one noun dependent on another. In Atakapa, however, the possessive pronoun was oftener understood than expressed. Adverbs were placed after the adjectives upon which they depended but before the verbs. As might have been expected, Chitimacha nouns and demonstratives may take the place of the independent pronouns when the latter are used as objects, but it is interesting to note that an identical use of nouns, demonstratives, and pronouns occurs in Tunica and Atakapa, the regular pronominal prefixes being then omitted. No clear distinction is made in Tunica and Chitimacha between the object and indirect object in these situations. Other nouns are brought into subordination to the verb by means of the locative suffixes. These languages also agree in placing the verb normally at the end of the sentence or clause, and in the further fact that all may place a noun with a locative suffix or postposition after it. This happens less often in Tunica than in Chitimacha and Atakapa. The subordination of one clause to another has already been touched upon. In Tunica and Chitimacha verbal suffixes and independent particles are used to effect this, but in Atakapa only verbal suffixes, and particularly a suffix *–n* or *–in*. On the other hand, Tunica depends less upon suffixes and more upon separate particles. Coordinate clauses are joined in practically the same manner in all.

Comparison of the Structural Elements

We now turn to a direct investigation of the phonetic similarities between the stems of the three languages, beginning with the affixes and other dependent elements upon which their grammar depends. Following is a comparative table of the personal pronouns and personal pronominal affixes.

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[1] There may, however, be a trace of the volitional in Tunica. See p. 30.

Comparison of the Pronominal Systems

SINGULAR

Person and gender		Tunica			Chitimacha		Atakapa		
		Independent forms	Objective prefixes	Subjective suffixes	Independent forms (used as objective prefixes)	Subjective suffixes	Independent forms	Objective prefixes	Subjective suffixes
First person		ima	ik-, i-	-ni, -n	ic	-ki, -k	wi	hi-	-ō.
Second person	mas.	ma	wik-, wi-	-wi, -i		-hi			
					him	-i	na	na-, n-	
	fem.	hăma	hik-, hi-	-hi, -a		-ci			
Third person	mas.	ūi, ūwi	ūk-, ū-	-ūi		-k			
					hus (same as pl.)	-i	ha	ha	
	fem.	tixte	tik-, ti-	-ti, -ta		-c			
Indefinite (singular or plural).				-iti	ni			hi- (?)	

DUAL

First person		inima	in-, i̱-	-ina					
Second person	mas.	winima	win-, wi̱-	-wina					
	fem.	hinima	hin-, hi̱-	-hina					
Third person	mas.	ūnima	ūn-, ū̱-	-una					
	fem.	sinima	sin-, si̱-	-sina, -sin					

PLURAL

First person		inima	in- i̱-	-iti	uc	-naka, -nuk	yūkit	ic-	-tse(1)
Second person	mas.	winima	win-, wi̱-	-witi					
					was	-nana	nakit	nak-	-tem.
	fem.	hinima	hin-, hi̱-	-hiti					
Third person	mas.	sămа	sik-, si̱-	-ta					
					hus (same as sing.)	-na (passive) -i.	hakit	cak-(sometimes used in singular in an indefinite sense)	-ūl, -ti (with intransitives)
	fem.	sinima	sin-, si̱-	-siti					

The first point to be noticed in this table is the close relationship which the independent pronouns bear to the objective prefixes. In Chitimacha there is no distinction between them. In Tunica all but three of the independent forms consist of the corresponding objective prefix plus a syllable *-ma*, which there is reason to believe is identical with the coordinate conjunction *ma* or *ma̱*, meaning "and," a conjunction often placed just before a quotation, where it has the sense of "as follows." The exceptions are the second person singular masculine in which the combination formerly occurred, it is evident, but the objective prefix has become lost, leaving *ma* to represent

this form by itself; and the third person singular, the masculine of which is identical with the subjective suffix, while the feminine consists of the corresponding objective prefix and the feminine suffix *–tc* used with nouns and evidently connected with the word *nuxtci*, woman. In Atakapa the independent forms of the second and third persons are directly taken from the corresponding objective prefixes, and those in the first person singular and plural are more closely related to the objective forms than to the subjective forms. It is to be added that the Chitimacha forms show clear indications of having been compounded, probably out of the old objective prefixes. All of these, except the form for the second person singular, end in *–c* or *–s*. Taken in conjunction with the affinities of the remainder of the word we have almost certain evidence that these sibilants are derived from the *–c* suffix employed with Atakapa independent forms, as *wic*, *nac*, *hac*, *yukitic*, etc., which has in course of time become permanently united with the pronominal stem.[1] It is plain that the independent plural forms in Atakapa are compounded of pronominal signs plus a suffix, or suffixes, *–kit*. Final *–c* is probably identical with the infinitive suffix *–c* to which reference has already been made. We must also separate from Tunica affixes, as evidently constituting no true part of the pronominal sign proper, *k–* in the Tunica singular objectives and the masculine plural, *–n* and *–na* in the Tunica dual and nearly all of the plural objectives, *–ti* in the plural subjectives. We are now in a position to make a comparative study of the elements which enter into the composition of these forms. Reference has already been made to the origin of final *–c* and *–s* in the Chitimacha independent pronouns. Comparing the first persons throughout we find evidence of two roots, *i* and *o* (or *u*), possibly formerly combined into one. The *i* root is illustrated by the following forms: Tunica *ima*, *ik–*, *inima*, *in*, *–ina*, *–iti*, Chitimacha *ic*, Atakapa *hi–*, *ic*, and possibly Tunica *–ni*, Chitimacha *–ki*, and Atakapa *wi* and *yūkit*. The *o* root is wanting in Tunica but illustrated by Chitimacha *uc*, Atakapa *–ō*, and perhaps Atakapa *wi* and *yūkit*, although it is possible that Chitimacha *uc* and Atakapa *ic–* may be directly related to each other through a vowel shift.

The stems of the Tunica second person are *wi* in the masculine and *hi* in the feminine. With these must be compared the independent Chitimacha forms *him* and *was* and the masculine suffix *–hi*. It is tempting to suppose Chitimacha *him* directly related to Tunica *hăma*, which would mean that Chitimacha formerly had the same suffix *–ma* that appears with so many independent Tunica forms, but this can not be proved. Except for the subjective plural the Atakapa stem in this person is *na*. Possibly it is connected with *hi* since there is some evidence of an *h–n* sound shift, but at least it agrees with *–nana*, the

[1] Final *–c* and *–s* are either phonetic variants of one suffix or two suffixes closely related in meaning.

subjective sign of the second person plural in Chitimacha. In the third person we encounter the following correspondences: Tunica masculine singular and dual *u*, Chitimacha independent *huc*, Atakapa *–ūl* in the third person plural subjective, and Atakapa *ha* in all other cases. The feminine sign in the Tunica singular is *ti* or *ta*. This does not occur in any other pronominal form, but may be compared with the Chitimacha demonstrative *ta* which designates feminine objects. Incidentally it may be observed that the prefix is almost identical with the Choctaw word for woman. In the third person dual and plural feminine, and the objective of the third person plural masculine, we find a syllable *si*. There is some question whether this ought to be regarded as a plural or a feminine sign, but since there are, besides, clearly marked signs for the dual and plural the theory that it is a feminine sign employed in the dual and plural has most to recommend it. In that case we must suppose that its employment in the masculine objective plural and masculine independent is later, and this idea is supported by the anomalous appearance of the *–k* suffix ordinarily found only with singular objectives. If the feminine origin of this syllable be admitted it furnishes us with an explanation of the Chitimacha feminine suffixes *–ci* and *–c*, employed in the second and third persons, although, indeed, in so far as our information extends, the latter are used only in the singular. The Atakapa objective sign for the third person plural is *cak–*, the employment of which shows clearly that it is only a shortened form of *icak*, person, and hence comparable with Tunica *cī*, a male human being, and Chitimacha *asi*, a male person or animal.

A fact of considerable importance in establishing the relationship between these languages on the basis of their pronominal forms is the weakness of all of the signs employed to indicate the second and third persons of the singular. In Tunica the complete signs are *–wi* and *–hi* in the second person and *–ūi* and *–ti* in the third. The former are, however, usually reduced to mere single vowels. In Chitimacha, at least in late times, the masculine and feminine signs were not ordinarily employed, a simple *–i* suffix appearing in both persons, and finally Atakapa appears to lack any corresponding signs whatsoever. It can not be said that there is any inherent relationship between these two persons that would account for such similarities. To emphasize this point I reproduce the signs under discussion in the following table:

	Tunica	Chitimacha	Atakapa
Second person singular	–wi, –i (mas.) –hi, –a (fem.)	–i	
Third person singular	–ūi (mas.) –ti (fem.)	–i	

We now turn to the signs indicating number. In Tunica, as I have said, *k* appears in the singular, *n* in the dual and with most of the plural objectives, and *–t* with the plural subjectives. On turning to Chitimacha we find a syllable *na* employed with every subjective suffix in the plural, the only distinction in use between it and the Tunica signs being that it is placed before the pronominal sign proper instead of after it. In the third person the passive form consists of this sign by itself, the ordinary active form being identical with that employed in the third person singular which we have already discussed. At first sight there might appear to be some question whether this sign were related to the Tunica plural sign or the Tunica dual, since shifts between *t* and *n* are common, but other evidence tells against this. In the following table the plural forms are brought into juxtaposition:

Tunica plural subjective suffixes	Chitimacha plural subjective suffixes
–iti	–naka.
–witi	–nana.
–hiti	
–ta	–na (passive).
–siti	

It will be noticed that all of the Tunica forms but one end in *i* and all of the Chitimacha forms in *a*. Now when we tabulate the Tunica duals instead we find the following:

Tunica dual subjective suffixes	Chitimacha plural subjective suffixes
–ina	–naka.
–wina	–nana.
–hina	
–una	–na (passive).
–sina	

While it is true that the Chitimacha forms occasionally drop the final vowel the appearance of final *a* in both along with the *n* and the constant presence of final *i* in Tunica plurals appears to prove that it is the Tunica dual sign with which the Chitimacha sign is related. It may be supposed that Chitimacha anciently possessed a dual as well as Tunica and that when the numbers broke down the dual suffixes were retained in preference to the former plurals. The probability of this having taken place is increased by the fact that, as we have seen, even in Tunica, dual forms are employed as objectives in both dual and plural.

But while there is now no trace of the Tunica plural sign *–ti* in Chitimacha it is in evidence in Atakapa. It appears as the intransitive suffix *–ti* in the third person and traces are perhaps preserved in the first and second persons *–tse(l)* and *–tem*. It may be perpetuated also in the final consonant of the independent forms *yūkit*, *nakit*, and *hakit*.

Finally, this leaves the singular sign *k* to be accounted for. As noted above, it also appears in the masculine objective of the third person plural. While it can not be identified with certainty in the other languages it is worth while to observe that, with the exception of the Atakapa subjective suffixes in the first and second persons plural, which seem as a whole to be unrelated to each other or to anything else, all of the remaining unexplained forms in those languages contain a *k*. These are *–ki* or *–k*, the Chitimacha subjective suffix of the first person singular, together with the last syllable in the corresponding suffix of the plural which is clearly related to it, *–naka*, *–k*, the masculine suffix in the second person singular in the same language, and the *k* of the Atakapa independent and objective forms, *yūkit*, *nakit*, *hakit*, and *nak–*. To account for the Chitimacha cases it may be suggested that the *k* sign which now appears only with Tunica objectives anciently entered into the subjective suffixes also, as is true of the corresponding dual and plural signs. In course of time these may have dropped off and disappeared, a vestige remaining in the first person and the third person singular masculine. If the Atakapa indefinite *hi–* is correctly characterized there can be little doubt of its relationship with Chitimacha *ni–* but its actual position as a prefix is somewhat uncertain.

We now have left as unique forms only the Tunica subjective suffix of the first person singular, *–ni* or *–n*, and the Atakapa subjective suffixes of the first and second persons plural, *–tse(l)*, and *–tem*.

Let us now summarize our analysis of the pronominal forms in the three languages:

COMPARISON OF THE ROOTS ENTERING INTO THE PRONOMINAL ELEMENTS

Tunica	Chitimacha	Atakapa
i (sign of first person in all numbers except possibly the first person singular subjective).	i (stem of independent pronoun, first person singular).	i, hi (objective prefix, first person singular and plural, and possibly corresponding independent forms).
hi (sign of second person feminine in all numbers), hăma (independent feminine pronoun in singular).	–hi (masculine subjective suffix, second person singular), him (independent pronoun, second person singular).	(See na; marked by absence of suffix in second person subjective singular).

COMPARISON OF THE ROOTS ENTERING INTO THE PRONOMINAL ELEMENTS—Con.

Tunica	Chitimacha	Atakapa
wi (sign of second person masculine in all numbers).	was (independent pronoun of second person plural), –i (suffix, second person singular).	(Marked by absence in subjective singular).
	–(na) na (subjective suffix, second person plural).	na (stem of all independent pronouns and objective suffixes in second person).
	uc (independent pronoun, first person plural).	–ō (subjective suffix, first person singular), wi (independent pronoun, first person singular), yūkit (independent pronoun, first person plural).
ū (sign of third person masculine in singular and dual).	hus (independent pronoun, third person singular and plural).	ha (sign of third person in singular and in independent form of plural), –ūl (sign of third person plural).
ti, ta (sign of third person feminine in singular) (also cf. Tunica article ta).	ta (feminine demonstrative).	
si (sign of feminine dual and plural and masculine plural, third person).	–ci (feminine subjective suffix, second person singular), –c (feminine subjective suffix, third person singular).	
i (final sound in subjective suffix of second and third persons singular).	–i (subjective suffix of second and third persons singular and third person plural, active).	(Subjective suffix of second and third persons singular wanting).
ci (a male human being)....	asi (a male person or animal).	ca, icak (a human being), cak– (prefix for third person plural, objective).
n (sign of dual and used also in all objective forms in plural, except third person masculine; in suffixes always appears as –na).	na (sign of plural in all subjective suffixes, –naka, –nana, –na).	

COMPARISON OF THE ROOTS ENTERING INTO THE PRONOMINAL ELEMENTS—Con.

Tunica	Chitimacha	Atakapa
-ti, -ta (sign of plural in all subjective suffixes).	.....	-ti (subjective suffix used with intransitives in third person plural), also occurs perhaps in suffixes -tse(l) (first person plural) and -tem (second person plural), and as final sound in independent forms, yūkit, nakit, hakit.
-tc (infinitive suffix).....	-c (infinitive suffix), ic, I; hus, he, they; uc, we; was, you (plural) (probably contain same suffix -c).	-c (infinitive suffix used frequently with independent pronouns).
-tc, -xtc (feminine suffix in tixtc, from nuxtci, woman).	kitca, woman.....	kic, woman.

The following may be added, but are more in doubt:

Tunica	Chitimacha	Atakapa
ma (suffix used in forming most independent pronouns), probably from ma, and)	m in him (independent pronoun of the second person singular).	
k (used with objective prefixes in singular and with masculine prefixes in third person plural).	-ki, -k (subjective pronominal suffix in first person singular), -k (subjective pronominal suffix in third person singular, masculine), k in -naka (subjective pronominal suffix in first person plural).	k in nàk (objective prefix in second person plural), and the independent pronouns, yūkit, nakit, hakit.
i in -iti (indefinite suffix in singular and plural).	ni- (indefinite objective prefix in singular and plural).	hi- (seems to be an indefinite prefix in singular and plural).

In Atakapa there are a reciprocal prefix, a reflexive prefix, and also a reflexive particle placed after the independent pronoun. In

Chitimacha one prefix is employed for both reciprocal and reflexive and there are independent reflexives employed after independent pronouns, but they are not much used. In Tunica we find a reciprocal prefix and a reflexive particle, but no reflexive prefix. The Atakapa and Chitimacha independent forms are *nūk* in the former and *năh* in the latter, the stems of which appear to be related. The Tunica independent particle *tą* may be connected with these, but there is no certainty. The Chitimacha reciprocal and reflexive prefix is *ap'c* which seems to be compounded of the locative prefix *ap'*–, indicating "motion toward," and a phonetic *c* which apparently conveys the reflexive idea. Possibly this prefix may have been derived from the locative suffix to nouns, demonstratives, and locative adverbs, *–up*, with the infinitive added. At any rate there is some evidence in Tunica, and even a little in Atakapa, of the former existence of a reflexive prefix *c*–. In the former language we have a number of names of parts of the body beginning either with *c* or *s* followed immediately by another consonant—an abnormal arrangement in Tunica. Another instance appears to occur in the use of the verb *nīyū*. Thus *nīyūkani* means I think, but *icnīyūkani*, I reflect. Another case is *pītū*, to lose, and *cpītū*, to forget. Here and there we find additional indications pointing in the same direction, and it should be mentioned that *c*– is the reflexive prefix in Natchez. The Tunica reciprocal may be accounted for as a simple contraction of Chitimacha *ap'*– or *ap'c*–. The Atakapa reciprocal *hōk*– or *hūk*– clearly has had a different origin—perhaps, since it means "together" as well as "each other," from some form of the adjective meaning all, which in Tunica has the form *hōtū*.[1] The Atakapa reflexive prefix *hat*– finds its counterpart in the Tunica *hatăna*, again, yet, still, which is contracted to *hat* and employed as a verbal prefix or an adverb placed just before the verb. This, in turn, may be connected with a Chitimacha prefix *kas*–, "back," to the place or toward the place from which the motion had started, the *s* in this prefix being identical with the reflexive *c* already mentioned. Chitimacha *hi*–, to arrive going, the opposite of *ap'*–, can not be identified with certainty in either of the other languages, though it may be compared with *ti*, the Atakapa stem of the verb to go, which frequently appears as an initial stem in Atakapa verb complexes. It may also be represented by the initial *y* of Tunica *yūka*, to arrive going, and *yaka*, to arrive coming. The Chitimacha prefix *kap*– which denotes completed action is probably derived from the independent verb *kap*, to stop, and both find their counterparts in Tunica *hapa* and Atakapa *pē*, which occur independently but more often as the second stem of a verb compound; as in *sak'hōpani*, I finish eating; *cokyaxpeo*, I finish eating. The Chitimacha prefix *ne*–, downward,

[1] Tū is probably a suffix.

is connected with the verb stem *nei* or *năx*, motion downward, and finds its cognates in Atakapa *nī*, to lie down; *nē*, low; and Tunica *na*, to lie down.

The Tunica locative prefixes are all derived from or closely connected with locative adverbs or postpositions. *Ha–*, up, may be compared with Chitimacha *p'e* or *p'ăx*, up, and *hō–*, motion outward, with Atakapa *pūc*, outside, and Chitimacha *nuk'*, out, outside. *Ki–* from *kitcu*, both meaning in, into, is found in Atakapa *kimati*, inside, and perhaps in Chitimacha *sekis*, inside, *Lū–*, motion downward, is contracted from *halū*, under, at the base of, with which we may compare Atakapa *hal*, back of, behind, last, and *hūi*, under, and Chitimacha *his*, under. The few locative prefixes in Atakapa need not be considered, since one of them is identical with a nominal suffix and will be considered along with other suffixes of the same class, and the rest with certain adverbs or postpositions to be treated in connection with other independent stems.

A plural suffix *–m* is found in both Chitimacha and Atakapa. The Chitimacha usitative suffix *–u* or *–ui* is paralleled by an Atakapa suffix *–u*, which generally has the force of a plural but is occasionally a usitative. In Tunica this is wanting, but the former presence of a suffix similar in form and in the same relative position in the verb is indicated by the constant appearance of final *–u* in disyllabic stems and the following specific examples: *laki*, it is night; *la–u*, at night; *Ta–ūc mīlī yarakati*, Red River is falling; *Ta–ūc mīlī yaratū*, Red River is low; *ūrōtkatą*, I am nailing something; *yuxki ta rōtūni*, a nail; *măra, me'ra*, cylindrical, a roller; *yunka merku*, a spool of thread; *tarku merkuniku*, a wooden barrel; *sapi*, a wave; *sapiku*, there are waves; *hintō wăran*, let us go walking to hunt; *ai axkalai ta hinu*, "the walking thing that produces fire," a locomotive; *hinaxk ikyakati*, I think like that; *hinaxku*, it is like that; *hinaxkoho*, it is not like that. Possibly this suffix has some connection with the initial vowel of *uki*, to sit, to remain.

We find a somewhat similar state of affairs when we consider the Chitimacha causative suffix *–pi*, which is very prominent in that language. It may be compared with a terminal suffix *–p* in Atakapa, the function of which is now mainly syntactic, but which has an analogous significance, "because," "on account of." While it is not clearly developed in Tunica, traces of it are abundant, showing that it is only just in process of disappearing from the language as a distinct suffix. In the first place, a quantitative comparison of the last consonant in disyllabic stems shows not merely that it occurs in more than one-seventh of all verb stems, but that it appears nearly five times as often in such stems as in the corresponding nominal stems. But we have more specific evidence. Thus the stem *raxki* signifies to be closed, something tight; *raxpa*, to enclose, to catch by enclosing; *raxpu*, a

covering, a coat. We also find *kōxpa*, to surround, to enclose, and *kûxpa*, to collect, to gather, as if the element *pa* were essential to the thought in each. *Lahi* and *laxpa* both mean to burn, and the latter seems to consist of *lahi* plus a syllable *pa*, but the difference in use between the two is not apparent. Again, *taka* means to run after, to pursue; *tapă*, to catch, to grasp; and *tăxpa*, to touch. *Kantūk ūtcūkani* means I am sucking something; *tcūxpakani*, I am sucking out. This last refers to a doctor sucking blood from a wound, and the word may signify in reality "I am causing blood to be drawn out." Perhaps the syllables *pi* and *pu* in the following examples may belong in this class: *tcōha pīnikaxtca*, I shall be chief; *tcōha pī*, be chief!; *winima tcōha pīwiti*, be chiefs!; *līxpi*, to enclose, to shut in; *līxpu*, a button, a blister (cf. *lēxki*, to pour); *kăxpu*, to nip, to cut (with scissors), also the stem of the word meaning tongs (cf. *kăxtc*, to bite); *sōpū*, to wither or dry up (cf. *sīhū*, dry); *cixpu*, to prick, to point (cf. *cikur*, knife; *cixkal*, rock, flint).

Paralleling the use of *-pi* in many ways Chitimacha has an auxiliary suffix *-ti*, signifying "to do," and with this may be compared the Tunica causative auxiliary *-ta* or *-ti*. In Atakapa it may be represented by the perfect suffix *-t*, which is used in such a way as to suggest at times the possibility that it was originally an auxiliary. The Tunica perfect is *-ki*, which appears to be identical in significance and function with the Chitimacha perfect *-ki*. The Tunica continuative is *-ka*, which finds its exact counterpart in Chitimacha *-ka* and agrees in position in the verb and in meaning with Atakapa *-ki*. The more common Chitimacha continuative, however, is *-ci*, which is placed much nearer the end of the verb complex and may probably be referred for its origin to the infinitive suffix *-c*. On the other hand, as we have seen, the Atakapa perfect must also be referred to a different origin. These facts point back, I believe, to a differentiation of one stem in Tunica and Chitimacha into a continuative *-ka* and perfect *-ki*, the first of which, in form *-ki*, has been retained in Atakapa, while the perfect has been supplied from another source. The Chitimacha volitional suffix *-mi* is closely paralleled in Atakapa by the volitional suffix *-ni* or *-ne*, and while *m–n* shifts are not common we seem to have here an assured case. It is to-day wanting in Tunica, but there is reason to think that in the noun-forming suffix *-ni* or *-ne* we have the vestige of this suffix combined with the noun-forming suffix *-n* employed in the other two languages. Thus, many nouns derived from verbs end in Chitimacha in *mon*, *mǫ*, or *mą*, in Atakapa in *-nen* or *-năn*, and in Tunica in *-ne* or *-ni*. In the first of these they are not often names of instruments, but in the others such names are common.

In Tunica the future suffix is *-tc*, *-xtc*, or *-xtca;* in Chitimacha it is *-tcu*; and in Atakapa *-ti* or *-ta*. The first two may very well be

related, nor is a connection between them and the Atakapa form impossible. It is, however, a curious fact that both the Chitimacha and the Atakapa affixes correspond exactly with the similar stems of the verb "to go" in the respective languages, and it is also curious that their position in the verb complex shows considerable irregularity. The possibility may therefore be suggested that they originated in the employment of the verb to go as an auxiliary much as we in English say, "I am going to do so and so." In that case we should have to assume that the Tunica suffix was unrelated or else that it had evolved after the incorporation of the stem *–tcu* had become complete. In Atakapa there is a second future suffix *–he* or *–ehe* not identified in the other two languages.

The possibility of an evolution like that just suggested is reenforced by the position of the negative suffix in the three varieties of speech. These agree closely in form, in Tunica and Atakapa *–ha* and in Chitimacha *–ka*, but the Chitimacha and Atakapa forms also appear as auxiliary verb stems, while the Tunica suffix never does. In Tunica we do, however, find a verb stem *pa* to which *–ha* may be suffixed, the resulting form having the significance of "it is nothing." Possibly *pa* may be the true equivalent of the other negative suffixes, but this can not be determined.

As intimated in the foregoing discussion, all three languages have a suffix *–n* or *–ni* which I have sometimes called a noun-forming suffix, but it frequently has a perfect or passive significance, and in Atakapa is often employed to bring one verb or clause into subordination to another.

The suffix *–c*, which I call the infinitive suffix, is present or continuing in connotation instead of perfect and complete like *–n*. It has about the force of the English ending *–ing* or the present participle of the auxiliary to be—being. Although placed close to the verb stem in Atakapa and at the very end of the complex in Chitimacha it is used in both in such similar ways, notably in the subordination of one verb to another, that there can be little doubt regarding its essential identity in the two. In Tunica its place is taken in part by a participial suffix *–tc*, which has about the same significance but is almost entirely syntactic in function. As *–c* is placed after personal and demonstrative pronouns in the two former languages to give emphasis it is possible that the nominal locative suffix *–c* in Tunica may be connected with it, and that either one suffix has been differentiated into two in that language or two have been reduced to one in the others. The past suffix in Atakapa is *–at* or *–et* and is extremely well developed. In Chitimacha a similar differentiation between past and present, or rather past and aorist, has taken place and traces exist in Tunica, but nothing clear enough to rest an argument upon.

The Tunica interrogative and imperative *-ki* is apparently wanting in Chitimacha and Atakapa, and between those two languages the devices for indicating the moods are considerably different. However, in view of the tendency observed in Tunica to employ one device for both, it is perhaps not mere accident that the interrogative in Atakapa and the imperative of the second person in Chitimacha are alike indicated by a terminal particle or suffix *a*. In Atakapa the imperative of the second person singular takes no affix. Nothing either in Tunica or Chitimacha corresponds to the Atakapa imperative in the first person plural *-lō* or the imperative sign in the second person plural *-tō*, although there may be some connection between the final vowel and the final vowel of the Chitimacha imperative suffix *-miū* employed in the first person plural. In Atakapa a final syllable *-ta* occurs which appears oftenest in future expressions in the first person singular, and this may have some connection with the Chitimacha particle *tä*, although the latter generally appears to be interrogative in its nature. Thus we find in Atakapa: *wi yīlen akēta*, I am going to stay to-morrow; *nakit tekō tiū-lūmlūmicta*, go ye and roll this barrel!; *yūkit ōīta*, we will sleep; *na ictsūmta*, you are going to pinch us; *na caktsūmta*, you pinch them; *it'hañ ticta*, where do you go? *wi ticta*, I go away; *yūkit tiūta*, we go away. While this appears to be only a form of the future *t* (or *-ti*) it might readily have developed into the particle that we find in Chitimacha.

Some of the auxiliaries have been touched upon. The Chitimacha auxiliary *ka* or *kex*, to want, to desire, shows no relationship to the Tunica equivalent, *wana*—which is not, however, employed as an auxiliary—but is somewhat closer to the Atakapa *kō*. The exact equivalent for the Chitimacha auxiliary *-ho*, signifying to be able, is not found in my Atakapa material, but *uxts*, to know how, is sometimes used in the same sense. The Tunica word is *ctū*(*ka*). Some of the Tunica auxiliaries have already been mentioned. The verb to go has the stem *a* in the singular and *ci* in the plural. The first of these is not very near anything found in the other languages, but it is possible that the plural stem is connected with the Chitimacha singular stem *tcū*. The stems of the verb to be, *a* and *ōn*, are also unlike anything in Chitimacha or Atakapa, unless the first may be related to Chitimacha *hi*, to be (sitting). However, some connection seems indubitable between *axsa*, to come, and Chitimacha *ăhi* or *ăx*, and *haca*, *haci*, to approach. If *ana*, to sit, is related to *na*, to lie, it may be compared with Chitimacha *nate* and Atakapa *nē*, *nai*, to lay, to put. Up to the present time I have discovered no probable equivalent in either Chitimacha or Atakapa for the Tunica auxiliary *ara*, to remain.

The Chitimacha plural suffix employed with nouns, *-ka*, seems at first sight entirely wanting in the other languages, but there are perhaps traces of it in the last consonant of the Tunica distributive

taxk, and in the *k* found with the following Atakapa pronouns and pronominal prefixes, *yūkit*, we; *nakit*, *nak–*, you; *hakit*, they. Of the principal locative suffixes *–c* seems to occur in both of these languages, though its functions in the two are not identical. In Tunica this has the force of "to" with motion; in Chitimacha its employment is more varied and it may be said to come nearer the English preposition "of," pertaining to something or to some place, and so verging also on a possessive. It is possible that this is connected with the infinitive suffix, which, as stated above, is used with pronouns as well as verbs, and, if so, it can be traced throughout all of the languages under discussion. An equivalent of the Tunica locative *–ta*, "at," seems to occur in a vestigial form with Chitimacha demonstratives, as *hat*, here, at this place; *wet*, there, at that place. There is less trace of it in Atakapa. Tunica *–tik*, toward, is parallel in meaning but not in form with Chitimacha *–up*. The *t* in *–tik* (or *–ta*) is possibly the same as the final consonant of the Atakapa postposition *ōt*, toward, especially if Gatschet is right in identifying the vowel in *–ot* with the stem of the verb to come, *ō*. We may also refer to *tīwē*, with, together with. On the other hand, Chitimacha *–up* probably finds its cognate in Atakapa *–p*, "at." The commonest Chitimacha locative, however, is *–nki*, or *–ki*, the latter form being used after consonants, and this covers the functions of both to and at. It is to be compared with the Atakapa *–kin* and *–ki*, which signify in or into. Some connection also exists in all probability between Chitimacha *–kin*, with, and *–ik*, the Atakapa suffix having the same meaning. Tunica *tą*, with, is probably not connected with these. This occurs after clauses as well as nouns and in such situations has the sense of "while," which aligns it with the Chitimacha subordinate conjunction *tä* or *tät*, when, after, while. Chitimacha *tcūn*, for, on account of, is approached in function by a little-used Atakapa postposition, *cō*. It is entirely wanting in Tunica. Nearly all of the Tunica indefinites and interrogatives are based upon a stem *ka*, demonstrative in character. With this may be compared Atakapa *kai*, then, at that time or place, and eastern Atakapa *kut* or *kat*, this. In Chitimacha there is a single case of the use of a final *ka* in the sense of where? Chitimacha *am*, what, something, thing, may be compared with Tunica *ma*, which occurs in *mahoni*, nothing. Atakapa *cōk*, which corresponds to it in function, can not be identified in either of the other tongues.

The demonstrative signifying an object close to the speaker and roughly agreeing with English "this" is almost the same in every one of these types of speech: Tunica *hă* or *he*, Chitimacha *ha*, Atakapa *ha* or *a*. The next degree of distance is indicated by words agreeing much less in form: Tunica *hi*, Chitimacha *wē*, Atakapa

ya. A still more distant position is denoted by Tunica *mi* or *ma*, Chitimacha *ma*, Atakapa *ma*. Chitimacha makes several other distinctions by the use of its demonstratives. There is a feminine *ta* already mentioned, and compared with the feminine personal pronominal affixes in the third person singular. It may also be related to the Tunica article *ta*, the only demonstrative which retains its position before the noun. The Chitimacha plural forms of the demonstratives *ha* and *ta*, *hō* and *tō*, are wanting in Tunica, although the open vowel suggests some connection with the stem of the word for all, *ō* or *hō*. My Atakapa material contains only the first three demonstratives.

In the following table I have placed all of the comparisons instituted in the foregoing pages in compact form:

TABULAR COMPARISON OF STRUCTURAL ELEMENTS

Tunica	Chitimacha	Atakapa
	năhi, reflexive particle....	nūk, reflexive particle.
a–, reciprocal; hatăna, hat, "yet," "again," "still" (placed before verbs); trace of reflexive prefix c–; ho(tu), all.	ap'–, to arrive coming; ap'c–, reflexive and reciprocal; kas–, "back," "motion to place left;" ō, stem meaning "all;" –up, toward.	hat–, reflexive hōk–, reciprocal, "each other," "together."
a, to go (singular); ci, to go (plural); yūka, to arrive going; yaka, to arrive coming.	hī–, to arrive going; tcu, to go (singular); tut', to go (plural).	ti–, to go (singular) (frequently prefixed to other verb stems); tūk, to bring.
hapa, to finish, to end.....	kap–, completed action; kap, to stop.	pē, to finish.
na, to lie down.....	ne–, downward; nei, năx, to descend.	nē, down; nī, to lie down.
ha–, motion up.....	pe, păx, up, to ascend....	
hō–, motion outward, out...	nuk', out, outside.....	pūc, outside.
ki–, motion into; kitcu, into.	sekis, inside.....	kimati, inside.
lū–, motion down; halu, under, at the base of.	his, under.....	hal, back of, last, behind; hūī, under.
	–m, plural suffix.....	–m, plural suffix.
–u, vestigial usitative or continuative.	–ū, –ūi, usitative.....	–ū, plural and usitative.
–p, causative in process of disappearing.	–pī, causative.....	–p, connective suffix meaning "on account of," "because."

TABULAR COMPARISON OF STRUCTURAL ELEMENTS—Continued

Tunica	Chitimacha	Atakapa
-ta, -ti, causative auxiliary.	-ti, auxiliary suffix "to do."	-t, perfect or auxiliary suffix (?).
-ka, continuative; ki, perfect.	-ka, continuative; -ki, perfect.	-ki, continuative.
-tc, infinitive suffix; -ic, locative suffix, with nouns, etc., signifying "to."	-c, infinitive suffix; -ic, locative suffix after nouns, signifying "of."	-c, infinitive suffix, with verbs and pronouns.
(See next).....	-m, volitional suffix.....	-ne, -ni, volitional suffix.
-ne, -ni, noun-forming or passive suffix (probably contracted from nen and containing a vestige of the volitional).	-n, -ni, noun-forming or perfect participial suffix.	-n, -in, passive suffix used in subordinating one verb to another.
-tc, -xtc, -xtca, future suffix	-tcū, future; tcū is also singular stem of verb to go (see above).	-t, -ti, future; ti, singular stem of verb to go (see above).
-ha, negative suffix.....	-ka, negative suffix and stem.	-ha, negative suffix and stem.
	a, imperative of second person.	a, interrogative particle.
	-miū, imperative of first person plural.	-lō, imperative of first person singular.
	tä, particle of interrogative character.	-ta, common Atakapa ending, perhaps connected with the future.
	ka, kex, to want (auxiliary)	kū, to want (used as auxiliary).
a (singular), to be.....	hi, to be (sitting).....	
ăxsa, to come.....	ăhi, ăx, to come; haca, haci, to approach.	ō, to come.
taxk, distributive particle..	-ka, plural suffix with nouns, demonstratives and adjuncts.	k in yūkit, nakit, hakit, independent plural pronoun; nak-, objective prefix, second person plural.
-c, locative "to" with motion (see above).	-c, locative "of".....	(Perhaps represented by infinitive suffix).

TABULAR COMPARISON OF STRUCTURAL ELEMENTS—Continued

Tunica	Chitimacha	Atakapa
-ta, locative "at;" -tik, locative "toward;" tą, "with," after verbs "while."	-t, vestigial locative with demonstratives; tä, tąt, subordinate conjunction "when," "after," "while;" (-kin, with).	ōt, particle, "toward;" tīwē, "with," "together with," "close to," "near."
	-up, locative "toward"...	-p, locative "at."
	-nki, -nk (after vowels), -ki, -k (after consonants), locative "to," "at."	-kin, -ki, locative "in," "into."
	-kin, "with".....	-ik, "with."
	-tcūn, on account of, for..	cō, postposition sometimes meaning "for."
hă, he, this.....	ha, this.....	ha, a, this.
hi, that.....	wē, that.....	ya, that.
mi, ma, still more remote...	ma, still more remote.....	ma, still more remote.
ta, article; ti-, feminine affix, third person singular (see above).	ta, feminine demonstrative.	te, a particle used before certain nouns with the force of an article.
hō(tū), all.....	ō in hō and tō (plurals of ha and ta).	mōn, kūc, all; -ū, plural and usitative suffix (see above).
ka, indefinite demonstrative.	ka, where? (one case of this occurs).	kai, then, at that time or place; kut, kat, this (E).
ma, thing? (in mahoni, nothing).	am, what, something, thing.	

This leaves as entirely unaccounted for the Tunica imperative and interrogative suffix *-ki*, the auxiliaries *ana*, to sit, *ara*, to remain, the plurals *ōn*, to be, *in*, to cause, and auxiliary *hǫ*, to be able, and the Atakapa future in *-he* or *-ehe*, the past suffix *-at*, the imperative suffix of the second person plural *-tō*, and the indefinite *cōk*, thing, something.

The above investigation has involved the use of a certain number of independent stems to the examination of all of which we are now brought. The results of this examination are contained in the table which follows. Parts of words in parentheses are either affixes or sections of the word which there are strong reasons for considering to be affixes. Atakapa examples from the eastern dialect are followed by a capital (E) in parentheses; for clarity (W), "western dialect," is used occasionally; examples from the Akokisa dialect by (Ak) in parentheses. It is possible to adduce a number of other

plausible examples, but their inclusion would increase the length of the paper without appreciably increasing the strength of the argument.

COMPARATIVE VOCABULARY

No.	Tunica	Chitimacha	Atakapa
1	.....	kū, water; kūn, river...	kâkaū, river, water, to rain; kako (Ak); akonst, river (E).
2	hōkō, sap.....	.....	hikū, soup, broth.
3	.....	nīki, gum, resin, pitch, sap.	nīkc, gum; niks (E).
4	titik, river, bayou.....	tcat, river, bayou.....	tai, river.
5	satci, to rain.....	sa, to rain	
6	lētū, green, unripe.....	.....	il, green, fresh, new; kalla, new (E).
7	tcika, gizzard.....	itciti, bile, gall; itcitem, yellow.	hatsīl, rusty, yellow; tat, yellow.
8	ūruna, bullfrog.....	tănū, tree toad or frog; tănū ȧtin, bullfrog, "big tănū."	anenūī, bullfrog.
9	.....	tūctū, frog.....	akitōc, toad; kettoctt, frog (E).
10	mūna, to run (as a liquid); tōta, to run (as a horse, etc.).	nūx, to run, to flow; nōtc, to float.	akna, to run (as a liquid) (ak- perhaps = ak, "liquid").
11	pōrū, to float.....	peks, to float.....	pōl, to float.
12	sapa, cold.....	tcaki, cold; hīpc, winter.	aktsaū, cold.
13	lē, to lose.....	.....	axli(c), to lose.
14	pītū, to lose one's self....	tūk, to lose (as a bird its feathers); tū, to finish, to end.	
15	ītca, flesh; tixcuma, meat.	.....	uc, body.
16	stayi, body.....	.....	hathe, body (E).
17	laka, frost; nalū, to hail..	nakt, ice, snow, to freeze, cold, frost.	alc, ice, snow, to freeze; adlect, snow (E); adlectaggn, ice (E).
18	tō, ice.....	tatū, to freeze.....	
19	sama, to cook.....	.....	am, to cook.
20	.....	cōxt, to boil; tūtc, to cook.	tlō, to boil.
21	yūk, to cook.....	.....	wak, to broil, to roast.
22	.....	hana, house.....	añ, ą, house.

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
23	rōmana, heavy	năhum, thick (as a fog)	kōme, heavy and thick (man, smoke, etc.).
24		natse(kip), heavy; kēsi-(ki), filled.	yack, heavy, full of; acebō, heavy (E).
25	haxcita, light (in weight)	hăx, light (in weight)	
26	halū, under, at the base of	his(kis), under	hal, back of, behind, last; hūī, under; holli, to lie down (E).
27	tōmū, to pound	tōx, to pound	em, to pound.
28	maka, fat, grease, oil	năki, nēki, fat, oil, grease; cuc nēma, soap, "wood fat."	eñ, fat, grease, oil.
29	waha, to weep, to cry, to crow, etc.		hai, to weep, to cry.
30		tēki, song, tune; tēki-yăxtpa, to play on an instrument.	nak, to play on an instrument.
31		yăk(t), to weep, cry, mew, and to play on an instrument.	yōk, to sing.
32		kan, like, almost like	han, almost, to come near doing, etc.
33	hana, to stop		hañ, to stop.
34	saxku, one; haixku, other, another.	unku, one, other, another	hannik, one (E).
35	maku, four	mēca, four	imatōl, four.
36	mītcu, ten	hēitci, ten	
37	pōlūn, one hundred	pūp', one hundred	hīyen pōn, one hundred (hīyen, hog or opossum).
38	eru, to laugh		hayū, to laugh.
39	amax, to make fun of; mare, saucy.	wek, to laugh; to laugh at	iwēū, to mock.
40	wixsa, to play, to joke	watci(kikc), plaything	
41	yi, pain (cause invisible)	nī, sickness	hē, pain, sickness.
42		tek', pain	(c)tiu, sick (E).
43	yaxci, to be sick and to be angry.	teks(t), to hate	yakst, to hate (E); īūc, angry.
44	te, tă, big	at'e, at'i, big	hets, big; witci, big (E).
45	hūri, wind, to blow (see below).	hō, to blow; pōku, wind (see below).	hi, wind, to blow.
46		pōx, to blow with the mouth.	pūns, to blow with the mouth.

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
47	.....	pēc, to fly	pats, to flutter; patspats, wind, air (E).
48	cka, foot.....	sō, foot, leg	hikat, foot, wing; ikao, foot (Ak).
49	.....	tīa, upper, butt end	tēū, tail end, upstream end.
50	tcal, thigh.....	maktsī, hip	mal, matl, thigh.
51	sa, tail.....	maxtcī, tail (max seems to mean "behind").	
52	tuka, shoulder (cf. yu, arm).	ōkun, shoulder.....	nōk, arm; nōk tēū, shoulder, "end of arm."
53	.....	waci, hand, arm.....	wōc, hand.
54	hici, to sift.....	hec, to sift.....	hīl, to sift.
55	ala, lazy.....	.....	hīlak, lazy, tired.
56	.....	pakâ, tired	pē or pēt, tired.
57	.....	tci(unic), bad.....	hatse(ec), bad.
58	ela, buzzard.....	.....	hilañ, buzzard.
59	katci, mother; katci tūhūktc, "little mother," mother's sister.	kō, mother's sister.....	hūkēt, mother.
60	si, father; onte, parent (either sex).	intci, father.....	teñ, tegn, mother (E); hitēt, father (W); cau, father (E).
61	rīna, perfume, good smell; nami, to stink, to smell badly.	.....	hima, muñ, to smell, scent, perfume.
62	īyū, opossum, hog.....	.....	hīyen, opossum, hog.
63	huxcū, to put within.....	hūx̌, to come in, to enter; hutc, to deposit inside; huk, to shut.	hōl, to put into, to shut up; yak, to seal.
64	hōxka, a hole, to bore...	hap', to bore a hole (cf. hop', full of).	hōp, a hole, a hollow, to pierce.
65	lōha, perforation.....	tūū, a hole.....	
66	pū, to see.....	.....	hū, to see.
67	hăra, to watch, to guard, to wait for.	hetc, to watch, to look ..	
68	aka, to drown.....	ketc, to drown	ik, to drop, to drip; ik- or hik-, motion downward; ikhaū, to drown; kōhits, to sink, to set (as sun).

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
69	tcōlu, to drip, to run down.	cō, to drip, to run down (cf. tcūptem, a drop of water).	
70	lūmi, warm, lukewarm; lahi, laxpa, to burn.	.....	ilū, heat, hot, warm, summer, year; alliu (E); lak, lam, to glitter, to shine; lak, sun; nagg, sun (E); laū, to shine, to blaze, to burn; yīl, to shine.
71	axtc, light, to shine; axcuk, day (cf. sehi, daylight).	tc'a, warm, hot; tcaa, sun; hits, its, to burn; wic, to burn; wacta, day; cakc, to light a fire.	cą, to burn; kitsōn(c), fire (W).
72	tama, to beg.....	.....	nam, to beg.
73	wīrax, to ask.....	waix, to ask (pl.).....	
74	mē, to hunt.....	ini, to pursue, to chase..	in, to search, to hunt; nal, to hunt game.
75	haxcupa, quick, fast....	tcūki, quickly	tsat, to run, to gallop, to walk fast.
76	nūli, side of; nūxta, on the other side; nūpal, joined, close together (cf. 78).	(cf. nunc, to wind into a ball).	inō, side, side of; nūm, on the side, on one side.
77	kăra, side of.....	keti, side of, near.....	
78	nūpal, joined, close together (cf. 76).	.....	ipal, near, by; tsipal, to glue, to put into contact.
79	.....	k'a, neck; kit, to swallow; kitaxk, throat.	kat, mouth, jaw; kōī, throat (see No. 143).
80	naxka, cheek.....	waku, cheek	ōkc, cheek; okst (E).
81	ciōhū, mouth.....	si, brim, border, shore, lip; ca, mouth.	ōci, on the edge of, on the shore or rim of.
82	saka, to cross, to ford.....	.....	icih, to cross, to ford.
83	kana, to cross, a cross....	nax, năn, to cross, to ford; tan, crossed lines.	
84	nixsa, young, new; nixsara, a youth.	nax(teki), young, little; naxtsăpu, a boy, a child.	
85	kōtcū, short.....	.....	hitson, little (cf. icōl, young, and cēc, young ones).

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
86	ōka, child; kū(tū), child, son.	ya, child, son	cka, small, little, son (E).
87	tcū, to take, to hold		icūl (sing.), icaū (pl.), to catch.
88		k'ap, to take, to catch, to seize.	kō (sing.), to take, to seize.
89	pala, to catch		yal (pl.), to take, to seize.
90	năxca, to bring up, to lead.	matc, to take away, to lead; (kap)tcuc(tcic), to grow (as a tree).	yūts, (its)yūts, to grow, to bring up, to raise.
91	ēri, to raise, to lift	kai, to raise, to rise	īyē, to rise, to grow.
92	si, head	kut, head	icat, head; achat, head (E); sac, head (Ak); itse, top, top of head; ōts, high, top.
93	hia, to wake someone	kayī, to awake, to live	kaū, to awake (of one's self).
94	nic, breast (male and female).	mi, female breast	nīk, teat, also milk.
95		tcaka, breast, stomach	ītsk, chest, breast.
96	ctax, face; tīric, before, in front of, ahead.		īt, face, chin (W); ītī, before, in front of, first.
97	la, night; lau, at night; latic, during the night.	tap', dark; tcima, night	īti, dark, evening, night; tem, teñ, dusk, evening, yesterday; tegg, night (E); tin, night (Ak) (cf. tēmōñ, ashes).
98	tōhō, to put in	te, to place, to settle; tapc, to stand.	itōl (sing.), to arrange, to put, to place.
99	tōhō, to throw down (same as above).	tuk, to throw	
100	pira, to prepare, to finish; hapa, to finish.	tcipi, to finish; kap, to stop.	pē, to finish.
101	uxcik, a shell, a spoon	ukctcū, an oyster; hūtcū, a mussel or clam.	ūk, a closed shell.
102	kīrka, a bivalve	k'ac, clam	
103	kahi, floor of a bridge, etc. (?).	kai, to raise, to lift	kaihi, kaii, to hang, to hold up.
104	sōwī, to hang	caki, to hang	
105	ăxka, crow	a', crow	kak, crow, kahagg (E).
106	rixku, tree, wood	hēka, log	kak, forest.
107		cuc, tree, wood	nēc, tree, wood.

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
108	ra, hard, strong	ya, hard, strong	lak, hard, strong.
109	sima, to scratch	cap, to scratch	kam, to scratch.
110	kōxsa, to scratch; hixcu, to plane.	kate, to rub; kats, to shove, to rub; katc, to scrape, to rake.	kōl, to rub; kats, to plane, to smooth.
111	wōxsū, a stripe or scratch; waxca, smooth; wixki, to scratch.	.....	wōī, to rub.
112	pēhū, to dress wood	pak', to scratch, to smooth, to plane.	
113	.....	tapc, to stand (cf. te, to settle).	ta (sing.), to stand.
114	tcaxka, to plant, to set a post in the ground, saddle on a horse, etc.	nuxtcu, to stand	tsō (pl.), to stand.
115	kali, to stand	.....	illitt, to stand (E).
116	rūkasą ugly	.....	katse, ugly.
117	nini, fish	.....	ntī, a fish, specifically trout.
118	.....	makc, fish, specifically trout.	katpak, a species of trout.
119	naxta, a high shore, high bank, cliff, mountain.	.....	nōl, a high bank; neklagg, a hill (E).
120	mūra, a mound of earth	.....	mak, a mound, a knot, a lump.
121	kaxti, to lock, to button	kuts, to cover; kōm, to cover.	kaū, to cover.
122	pōku, a cover (cf. wōxka, to cover).	hūk, to shut; hutc, to lock.	pan, paxn, to shut, to close; păc, a cover.
123	lax(pa), to cover; lēx(pi), to close, to inclose.	.....	lak, to lock.
124	rax(ki), rax(pa), to close, to inclose.	yapa, to lock	yax, to seal.
125	lūpi, to die	nup'i, to die	pix, to die (pl.).
126	tīni, to have, to possess (cf. hīkīra, rich).	ti, te, to have, to possess (?) (cf. katc, rich).	kē, to have, to possess.
127	ūki, to sit, to remain	hi, to be (sitting)	kē, to sit.
128	.....	te, to set down, to place.	tix(t) (sing.), to lie.
129	kūī, to paddle	kati, to paddle, to row	kēm, to paddle, to row.
130	lixtca, lixtc, to wet, wet, damp.	tek, to wet, wet, damp, moist.	akilik, ikilik, to wet, to soak (ak=liquid).

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
131	ōkecta, the left hand.....	kīsak(tic), on the left hand.	kets(ti), the left hand.
132	kitcu, into, inside; ki–, prefix with same meaning.	kam(ic), behind, in the rear; se(kis), inside of.	kima(ti), inside, in the middle.
133	kaha, to join, to rejoin....	kūi, to meet, to join (cf. kayi, to turn).	kin, to meet.
134	pi(n), to sharpen (cf. tini, to cut).	ik', a point, a sharp point.	kini, to sharpen.
135	pano, to pass.....	pahī(kup), in a crossing direction.	kipaxc, across.
136	nuxtci, woman.....	kitca, woman	kic, woman; nikiil or nikiib, woman (E).
137	ēkūx, to bend; hēkun-(ic), corner; kōra, round.	kōks, globular; kōkci, to squat; kūtix, to turn (like a wheel) (cf. kayi, to turn).	kōk, to bend, crooked; kōc, angle, inlet; kōl, undulating, wavy.
138	tēh, to turn.....	tēti, to twist.....	
139	ēpū, to fold, to bend, a river bend.	păc, to fold, to double ..	pōn, to fold, to bend.
140	cka, but.....	hencka, although, but (he is probably a demonstrative).	kcō, but.
141	ōxkū, egg.....	.....	kū, egg (of hen); kiu, egg (E).
142	.....	tsīà, egg (any kind).....	tsel, egg (of louse, etc.).
143	saku, to eat.....	kuc, to eat.....	kul, to swallow.
144	yaxpa, hungry.....	.....	ya, to eat.
145	tca, grandparent, grandchild.	.....	kulca, grandparent, probably grandchild also.
146	hō(tū), all	ō(nak), all; ō(nic), ō-(ki), many; hui(nak), the whole (cf. hō, these, demonstr. pl.).	mo(n), all; –ū, –ō, pl. and distributive suffix; heū, many (cf. hōk–, together, each other).
147	.....	ketci(nak), all; kis, all, entirely, wholly.	kūc, all or very.
148	kutca, to crush; kēri, to cut, to notch; kīri, to grind.	kasux, to mash, to break; tsi(s), to cut; kixtsi, to pound (in a mortar).	kuts, to cut; kets, to cut (E).
149	kătc, to bite; kăxpu, to cut (with scissors).	kax, to bite.....	

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
150	mēlī, black (cf. mīlī, red).	pīni, pīnun, red	mēl, black (W).
151	kunaca, dark; kota, gray (cf. kayi, rusty, brown, yellow).	kūptăm, brown; kūps, coal.	kūts, red; tōl kūts inaha, brown, "like red."
152	nūxpa, to rub, to wipe	năxpa, to paint one's self.	nōx, nō, red face paint.
153	ya, deer	(cf. last syllable of kamtcin, deer.)	lans, deer; itstanst, deer (E).
154	erusa, to know	kaku, to know	uxts, to know.
155	lami, soft, supple		līl, soft; ell, soft (E).
156	tōx(katan), something soft or brittle like brittle stone.	tek, anything soft; or tox, to break.	
157	tax(ta), prairie		lōxk, prairie.
158	taxkiri, dirty	tapa, mud	tlakc, dirty; tlōkc, muddy, roily; lū, mud.
159	pic, mud, muddy	păki, dirt, dirty	
160	hali, land (but see p. 54)	nē, land	ne, land.
161	maxsi, to turn, to circle; mari, to return; muxtū, to wrap up.	tamix, to turn around; hamit, to turn around; (kap)pitc, to turn all the way around; wat', to wrap up.	ma, to mix (see No. 137); mic, to turn, to revolve; pic, to twist, to contort; paū, to swing, to whirl.
162	mūtcū, to plunge; pata, to fall.	watà, to fall	mak; to plunge; makaū, to fall.
163	wăxsa, wexsa, to jump	mē(m), to jump, to jump down; owatc, to dance.	pūx, pūm (pl.), to jump, to dance.
164		akc, to buy, to sell; nakc, to trade, to exchange.	yīk, to bargain, trade, sell, buy; makē, to exchange, buy, sell, etc.
165	maxki(na), deep	k'am, tall, long	mēts, tall, high; mañ, long; kame(ta), to lift.
166	maki, to dig, to hollow, to plow.		mōc, to dig, to bury.
167	yaka, to arrive coming; yūka, to arrive going (cf. ăxsa, to come).	ăhi, to come	ō, to come; mōk (sing.), naū (pl.), to arrive.
168	ma, and	ne, and (between nouns).	n, and (between nouns).
169	nīyū, to think, to believe.	kīmi, to think, to believe.	hinai, to think (cf. nak, to hear).

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
170	wī, to hear, to listen, to understand.	wop', to hear, to listen..	wīf, to believe.
171	naxk, like, near.....	nakc, near, close to; also small.	nak, about, near, like, very, so.
172	naka, war.....	nakc, war, warfare, fight, battle.	nats, battle, to fight.
173	watc, to fight.....	watc, to attack.....	
174	.....	ukc, snake.....	ōtse, snake.
175	nara, snake.....	.....	natkoi, snake (E).
176	ya, to make, to cause....	.....	ka, to make; naŭ, to cause.
177	maxcū, to build.....	tcux, to build; utc, to make, to cause.	
178	lakac, hair.....	.....	nau', hair, feathers, fur, wool.
179	yūxtari, feather.....	kūx, kū, hair, feathers.	kuec, hair of head (Ak); taec, hair of head (E).
180	yara, low (as a river)....	nēi, to be low (as the tide).	nal, shallow.
181	na, to lie down; nō, to lay, to put; hōnu, to descend.	na(te), to lie down; nei, năx, to descend.	nī (sing.), nōk (pl.), to lie down; nē(p), low, lower; ne, nai, to lay, to put.
182	rapa, to kill.....	tem (pl.), to kill.....	nima, to kill.
183	nami, louse.....	.....	niñ, louse.
184	.....	tsat, louse.....	tsilatsk, wood tick.
185	sălax, locust tree.....	sit, locust tree.....	nīt, locust tree.
186	ōnīr, horn.....	imps, horn [1].....	nōx, horn.
187	hin, to walk.....	(cf. ni-i, footprint).....	nōn, to walk; wan, to travel.
188	pita, to walk; tēti, trail, road.	ni-i, footprint.....	ti, to go; ta, to leave.
189	.....	tūt' (pl.), to go in company.	tūt, to bring.
190	pahal, foot, sole of foot; pēlō, to lie flat.	(cf. pak', flat).....	pak (sing.), pam (pl.), footprint.
191	pī, to go out; pita, to walk.	mic, trail, road.....	
192	ci (pl.), to go.....	tcū (sing.), to go.....	
193	namū, to remain with, to live with.	nam, to dwell, to live; namū, village, town.	nūl, to dwell; nun, village, to remain, sit, stand, live.

[1] *N* frequently changes to *m* before *p* in the languages of the Southeast.

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
194	.....	ūi, to carry, meet, drag, bring.	ōī, to send.
195	uxsū, uxsūr, seed, grain..	tcaca, seed (of cereals)..	ōts, grain, seed; cō, seed, kernel.
196	puxti, to open (a flower); puxtcū, to crackle, to burst.	.....	pai, to open (anything).
197	pāka, to strike.....	.....	pai, to chop; pak, pam, to strike, beat, etc.; pa, mortar.
198	paxsa, to split.....	pis(tk'), a piece of split wood (cf. cap, to split).	
199	pa, too, also.....	.....	pai, to return, too.
200	pāxka, flat.....	pak', flat; pāc, narrow, thin.	pax, thin, flat; pac, slim, lean (E).
201	pira, flat, level, a flat, a level.	pitik(nic), smooth (cf. hipi, prairie).	pal, flat, level, even.
202	wala, to split.....	.....	pal, to split.
203	tapa, to plant.....	(cf. pō, a plant)	pa(k), pa(m), to sow.
204	axpū, to bathe.....	yūp', to bathe	pats, to wash.
205	saxtci, to wash.....	.....	tsak, tsauk, to wash, to bathe.
206	sapa, to whip, a whip....	(n)ūtc, to whip.....	pats, to whip.
207	pixsa, to press, to squeeze.	(n)ap'(ka), to press.....	pats, to squeeze.
208	pūska, to swell; pixtci, to be full; pūc, burst.	hop', to be full; pis(ki), swollen.	pēū, to swell; pū, full.
209	muxki, smoke.....	pōk'ta, sky, cloud.....	pō, smoke.
210	aparū, cloud, sky.....	pōk'ta, cloud, sky.....	
211	.....	cits, smoke	ci, smoke (E).
212	cūrū, to smoke tobacco...	cip, to smoke tobacco...	tsīct, tobacco pipe.
213	.....	uīpi, to bleed, blood....	iggp, blood (E).
214	.....	puc(na), heart.....	pōc, to bleed; pōck, blood.
215	yōla, to leave, to abandon.	hōx, to abandon, to cease, to stop.	pōts, to leave, to let go, abandon.
216	hū- (prefix); howax(ta), outside, out.	.....	pūc, outside.
217	nōkuci, bear.....	akunc, bear.....	cakō, bear.
218	cī, a male human being..	asi, a male person or animal.	ca, icak, a person, a human being; cak- (pl. prefix).
219	ōn, ōni, a person, a human being.	pan(c), a human being, a person.	iōl, a male.

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
220	cixpu, to prick, to sting; cikūr, a knife (cf. cixkal, flint, and cūitci, to shoot).	cekutci, to wound	caki, to wound; yapūx-(ne), a spear (W).
221	.....	tsa, to pierce, to stab; tsa(mpuina), a lance.	tsa, a spear, a lance (W).
222	.....	catc, to chew tobacco	tsa, to chew; tsam, to bite.
223	tcuxkū, to peck, to chop (cf. tcal, to split).	tcax, to chop, to peck, to dig out wood.	
224	era, tobacco	nēt, tobacco	tsīt, tobacco.
225	.....	yukc, panther, cat (gener.)	cakc, wildcat, panther.
226	tcumu, wildcat	tcewa histamon, wildcat, "hiding under trash."	ciwon, cat.
227	ciki, or hiki, skunk, or badger.	kīctă-ă, skunk (?)	cikitic, skunk.
228	cuxtci, to sew	tcuc, to sew	cī(l) (sing.), ci(u) (pl.), to sew.
229	(tax)cle, beautiful, pretty	.....	cili, or ciliñ, beautiful.
230	haxtcū, salt	tsaxtsa, nē-tsaxtsa, salt (ne=earth).	cīck, nē-cīck, salt (ne=earth).
231	tcaxki, crawling	.....	cīū, to crawl.
232	cira, to fear	(cf. caxtun, wild)	cō(l) (sing.), cō(m) (pl.), to be scared.
233	tcasa, to rattle	sūk, to shake, to tremble.	tsai, to shake, to tremble; cōn, to rattle, to rustle; ciñ, to rattle.
234	.....	năin, to be afraid	anian, to be afraid, wild.
235	cira(ta), back; cki, backsides.	.....	cūk, back (of arm, etc.).
236	naha^{n}, back (noun)	nuku, back (noun)	
237	sa, dog	.....	cūl, dog.
238	sihu, to dry	.....	tsak, to dry.
239	sōpū, dried up, withered.	tcap, shriveled, dried in the sun.	
240	tcal, to split, to break lengthwise, a branch (cf. caha, a pronged branch, and tcūhū, to split).	cap, to split; atcu, fork of a tree.	tca(l), to break lengthwise, to crack.
241	taxki, bone	katsĭ, bone	tsī, tsigg (E), bone.
242	cilăwaya, quail	.....	tcilam, quail.

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
243	căpa, satisfied, pleased	tcaix(tem), happy	tsic, satisfied, pleased (cf. cot, to love (E)).
244	cilxka, blackbird	tcext, blackbird	ts'ōk, blackbird.
245		tcam(ctci), to milk a cow.	tsūm, to pinch.
246	waxka, rough	tcaxki, rough	tsuk, rough.
247	lēyū, straight	tcēt, straight; also truth, right.	tai, straight.
248	kaxci, true, real		uc, true, real.
249	taxkic, skin, bark, etc		tal, shell, bark, peeling, rind; tīl, skin, leather.
250	wicka ta tahi(ni), bow and arrows; tini-pixsi, arrow-head (cf. tīni, to cut).	axt, bow, arrow	te, bow; tik, arrow.
251	wicka, gun, bow	suspi, gun, bow	skenne, arrow (E).
252	rixsa, spotted		tēk, spotted.
253		tcap, spotted	tsōp, spotted.
254	wīluk, elm		till, elm (E).
255	tcinak, knee	mōkun, knee	timak, knee.
256	tōlū, round, a round thing		tōkc, a ball; lūm, to roll.
257	tcū, to suck		tōts, to suck, to kiss.
258	hēri, a canoe	hūta, a canoe	tu, a canoe.
259	rici, nose	cic, nose	uts, nose, bill; otse, nose (Ak).
260	ciri, to smell	si, to smell	
261	waka, to command		wahi, wac, to order, to command.
262	wīhū, to fan, a fan		wal, to fan, to wave, billowy, wavy.
263	wic, to talk (?)	wen, the tongue, speech	wan(ts), to tell; wēn, to pray.
264	nī, yana, to tell, to say	nat', to tell, to say; näts, to talk.	nam, to beg (cf. nēl, tongue).
265	lēyū, to discourse	te, tä, to say	
266	racki, leaf	tcīc, leaf	wac, leaf.
267	waha, to bark	wăx, to bark	wēwēf, to bark.
268	wēn(ū), to find		winē, to find.
269		(kai)hame(mi), to lighten (kai=rain).	yem(yīlc), to lighten.
270	hal, to draw, to paint	hak(c), to draw, to mark	yūl, to draw, to write.

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
271	.....	cīyu, gum tree.....	ehēū, gum tree.
272	.....	ăhă, yes	haha, yes.
273	.....	ūpa, two.....	hapal(ct), two (E).
274	.....	asepa, brother.....	hacka, brother (E).
275	.....	ketcepa, sister	kicēt, sister.
276	tate, brother-sister relation.	tati', brother.....	
277	.....	hest'mu, father-in-law, mother-in-law.	hican, father-in-law, mother-in-law.
278	.....	aca(na), old.....	waci, old.
279	.....	utci, to rot.....	īc, to rot.
280	.....	can, to appear, to come out.	ica, to be born.
281	.....	kaxtcintc, oak; kaxtcintc ȧtin, live oak, "big oak."	kañcinkc, live oak.
282	.....	kēsi, liver	ketsk, kets, liver.
283	.....	kuputcaka, gourd, gourd rattle.	kipatsu, gourd.
284	tcūhū, to spit.....	tûx, to spit; cap, to spit; tuxtepa, spittle.	kitūc, spittle.
285	.....	kak't, basket.....	kō, basket.
286	.....	ak(c), poor.....	lak, poor.
287	.....	wakic, lizard.....	makēts, lizard.
288	.....	macku, fly.....	matsiwa, fly.
289	.....	hixmo, bee	miñ, bee.
290	.....	mun, min, short.....	mōk, short (cf. miñ, weak).
291	cila, insect, small creature, caterpillar.	tcīīc, caterpillar, bug, insect.	
292	yunka, yuka, cord, rope.	.....	ō, cord, rope, string; ok, cordage (Ak).
293	.....	uc, dress, garment, to wear; wai, to weave.	ōk, to weave, cloth.
294	.....	pai(mic), nest of bee, etc.	pa, nest of bird, bee, or ant.
295	cē, nest.....	tcăm, nest of bird.....	
296	.....	pax, to shoot, to thunder.	pem, to shoot.
297	.....	kamakic, wolf.....	camc, wolf.
298	.....	sixtsup, mulberry; sixtsup ȧtin, fig, "big mulberry."	cec, mulberry, fig; tsicibb, mulberry (E).

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
299	kohina, pot (cf. pōkū, pot).	kēka, cup, plate	
300		nas, to sweep	nē-cil, to sweep, "to sweep the ground"(?)
301		sīts, tree moss (after it has turned black).	cīt, tree moss.
302		tcax, bird	tsalagst, bird (E).
303		căx, to enter, to hide	tcan, to hide (cf. tsăn, to steal).
304		tsa, to throw, to cast	tsañ, to push.
305		cik, to forget, not to know.	tsēūwan, to forget.
306		kenexpc, beads, necklace.	takīnen, beads, a string of beads.
307		tekt, briars	tekaūc, a branch; tekamc, branches.
308		wa, maternal uncle	waxc, uncle (either side).
309	ki, maternal uncle	kăn, paternal uncle	
310		nawa, sand	yēū, sand.
311	wūtci, to whistle		wōc, to whistle.
312	haxsa, to saw	cakc, to saw	
313	ūhū̧, to cough	ux, to cough	hōp, to cough.
314	hūmiya, humming bird	ēmu, humming bird (common).	
315	yūi, yūa, to give	a-i, to give	
316	hax, to open	hakin, to open	
317	waxtcū, to take off a coat	hătc, to take off a cover	
318	kōra, to drink	katc, to drink	
319	hōxtci, to limp	nantcu, to limp	kets, lame.
320	hapaxcka, soft-shelled turtle.	pasta, soft-shelled turtle	
321	ni, tooth	ī, tooth	
322	ti, friend	kita, friend	
323	tcik, belly	ci, belly	
324	tcarina, kingfisher (tcari may mean "to mew").	tcanȧ, kingfisher	
325	tcīru, curly	tcex, curly, kinky	
326	raci, ratci, calf of leg	tsīya, calf of leg	
327	peri, to surpass, to excel	waiti, to surpass, to excel	ītī, more than, to surpass, to excel.
328	lūētca, ear	waac, ear	

COMPARATIVE VOCABULARY—Continued

No.	Tunica	Chitimacha	Atakapa
329	lapa, to land	năm, to land	
330	axtci, axtca, to be	tci, to be (standing object).	
331	haxku, cypress	akcuc, cypress (cuc = tree).	
332	yaka, heron, crane	kakc, heron, crane	
333	năra(ni), spirit, ghost (cf. nar, to fly).	neka, spirit, ghost	
334	kūmac, stone	nūc, stone	
335	hixcūka, dew	kasī, dew	
336	(cf. kayina, goose)	na-ic, goose	enetst, goose (E).
337	yari, to be ashamed	nēci, to be ashamed	
338	wīra, to count	ūk', to count	
339	narūxki, mortar	hoku, mortar	

When we examine this material to see what phonetic laws may be discovered governing changes between these languages, we find that many sounds do not change at all or change but slightly and that although sound-shifts certainly occur the number of examples illustrating each is limited, while there are many indubitable sound-shifts of which only one or two cases are to be found.

Between Atakapa and Tunica the following shifts appear to exist and are illustrated by more than one example:

ATAKAPA L—TUNICA R

Atakapa	Tunica
pōl, to float	pōrū, to float.
lak, hard	ra, hard.
pal, flat, level	pira, flat, level.

ATAKAPA T—TUNICA R

tēk, spotted	rixsa, spotted.
tsīt, tobacco	era, tobacco.
tu, canoe	hēri, canoe.
tūt, before	tīri(c), before.
ītī, to excel	peri, to excel.

ATAKAPA Y—TUNICA R

Atakapa	Tunica
hayū, to laugh	eru, to laugh.
īyē, to rise, to grow	ēri, to raise, to lift.
yak, to seal	rax, to close.

ATAKAPA K AND X—TUNICA R

kōñ, kōme, heavy	rōmana, heavy.
kak, forest	rixku, tree.
mak, a mound, a knot.	mūra, a mound.
cūk, back	cira(ta), back.
nōx, horn	ōnīr, horn.

ATAKAPA K—TUNICA H

Atakapa	Tunica
tsak, to dry	sīhū, to dry.
kets, lame	hōxtci, to limp.

ATAKAPA TS—TUNICA S

ōts, grain, seed	uxsū, seed.[1]
tsak, to dry	sīhū, to dry.

ATAKAPA TS—TUNICA C

kets(ti), left	ōkec(ta), left.
tsilam, quail	cilawaya, quail.
tsic, satisfied	căpa, satisfied.
uts, nose	rici, nose.

ATAKAPA C—TUNICA S

icih, to ford	saka, to ford.
cō, seed	uxsū, seed.[1]
cūl, dog	sa, dog.

ATAKAPA C—TUNICA TC

uc, body	ītca, flesh.
kic, woman	nuxtci, woman.
cīck, salt	haxtcū, salt.
cōn, to rattle	tcasa, to rattle (?).
wōc, to whistle	wūtci, to whistle.
-c, infinitive suffix.	-tc, subordinating suffix.

ATAKAPA N—TUNICA T

Atakapa	Tunica
nam, to beg	tama, to beg.
nōk, arm (including shoulder).	tuka, shoulder.

ATAKAPA TS—TUNICA T

hets, big; witci (E).	tē, big.
tsam, to join	tēpi(n), joint.

ATAKAPA T—TUNICA L

īti, dark; tegg (E), night.	la, night.
tai, straight	lēyū, straight.

ATAKAPA M—TUNICA P

nima, to kill	rapa, to kill.
tsam, to join	tēpi(n), joint.
mak, to plunge	pata, to fall.

ATAKAPA Ñ—TUNICA M

eñ, grease	maka, grease.
niñ, louse	nami, louse.

ATAKAPA N—TUNICA M

in, to hunt	mē, to hunt.
n, and (between nouns).	ma, and.

[1] I believe both of these comparisons are correct, uxsū being the parent form, or near the parent form.

The following shifts are illustrated by but one example, but in each case the example is a strong one: n–r; w–r; y–h; p–h; tl–t; t–n; h–y; l–y; h–p; y–p; p–w.

Between Atakapa and Chitimacha we find the following shifts illustrated by more than one example:

ATAKAPA K—CHITIMACHA H

Atakapa	Chitimacha
kak, forest	hēkà, log.
kōm, thick	năhum, thick.

ATAKAPA TS—CHITIMACHA C AND S

kets(ti), left	kīsak(tic), on the left hand.
ōts, seed	tcasa, seed, grain.
tsōp, spotted	cap, spotted.
uts, nose	cic, nose.
ketsk, liver	kēsi, liver.
matsiwa, fly	macku, fly.
tsan, to hide	căx, to hide; se, inside.
tsēŭwan, to forget	cik, to forget.

ATAKAPA C—CHITIMACHA S

ca, male	asi, male.
ōci, on the edge of	si, border, rim.
nē-cil, to sweep	nas, to sweep.
cīt, tree moss	sīts, tree moss.

ATAKAPA C—CHITIMACHA TC (OR TS)

yack, heavy	(n)atse(kip), heavy.
kic, woman	kitca, woman.
cī(l), to sew	tcuc, to sew.
cīck, salt	tsaxtsa, salt.
īc, to rot	utci, to rot.
kancinkc, oak	kaxtcintc, oak.
cec, mulberry; tsicibb (E).	sixtsup, mulberry.
cō, for	tcūn, for.

ATAKAPA N—CHITIMACHA T

Atakapa	Chitimacha
nak, to play on an instrument.	tēki, to play on an instrument.
nima, to kill	tem, to kill (pl.).

ATAKAPA N—CHITIMACHA M

nīk, female breast	mi, female breast.
nōx, horn	imps, horn.[1]
-ne, volitional suffix	-mi, volitional suffix

ATAKAPA H—CHITIMACHA K

han, almost	kan, like, almost like.
-ha, negative suffix.	-ka, negative suffix

ATAKAPA L—CHITIMACHA T

(aki)lik, to wet	tek, to wet.
pal, flat, level	pitik(nic), smooth.

ATAKAPA Ñ—CHITIMACHA N

añ, house	hanà, house.
eñ, grease	năki, grease.

ATAKAPA M—CHITIMACHA W

makēts, lizard	wakic, lizard.
mak, to plunge	watu, to fall.

[1] See footnote, p. 45.

The following shifts appear in one example each: y–h; p–h; k–t; ts–t'; k–y; l–y; w–tc; n–s; k–c; y–t; h–n; ts–n; c–y.

Chitimacha and Tunica show the following apparent shifts illustrated by more than one example each:

CHITIMACHA K—TUNICA H (OR X)

Chitimacha	Tunica
-ka, negative suffix.	-ha, negative suffix.
tuk, to throw, as to throw out earth in digging.	tōhō, to throw.
pak'(ti), to scratch, to smooth.	pēhū, to dress wood.
kap(te), to finish...	hapa, to finish.
kasī, dew.....	hixcūka, dew.
nuku, back.....	naha̧, back.
ukctcu, oyster.....	uxcik, shell.
katc, to shove, to push.	hicū, to shove, to push.

CHITIMACHA N—TUNICA L

nup'i, to die.....	lūpi, to die.
nim, nǎm, to land...	lapa, to land.
nūx, to run.....	lūta, to run.
nakt, frost, ice, cold.	laka, frost.
nē, ground, land [1]..	halī, ground, land.[1]
pīni, red.....	mīlī, red.

CHITIMACHA T—TUNICA L

tap', dark.....	la, night.
tek, to wet.....	lixtc, to wet.
tsat(papa), a fork...	tcali, a fork.
sit, thorn tree.....	sǎlak, thorn tree.
tcext, blackbird....	cilxka, blackbird.
tūū, hole.....	lōha, hole.

CHITIMACHA N—TUNICA Y

ni, to be sick.....	yi, pain.
nēci, to be ashamed.	yari, to be ashamed.
nipi, to cook	yūki, to cook.
nōctin, nail.....	yuxki, nail.

CHITIMACHA T—TUNICA R

Chitimacha	Tunica
tem, to kill (pl.)....	rapa, to kill.
waiti, to surpass.....	peri, to surpass.
hūta, boat, canoe...	hēri, boat, canoe.
keti, side of.....	kara, side of.
nēt, tobacco.....	era, tobacco.
pitik, smooth.....	pira, flat, level.

CHITIMACHA K, X, AND H—TUNICA R

kaku, to know.....	eru(sa), to know.
peks, to float.....	pōrū, to float.
ūk', to count.....	wīra, to count.
kōks, globular.....	kōra, round.
hoku, mortar.....	narūxki, mortar.
neka, spirit, ghost...	nǎra(ni), spirit, ghost.
pōk'ta, cloud, sky..	aparū, cloud, sky.
tcex, curly, kinky..	tcīru, curly, kinky.
kēkȧ, log.....	rixku, tree.

CHITIMACHA C AND TC—TUNICA R

hetc, to watch, to look.	hǎra, to watch, to look.
katc(ti), to drink....	kōra, to drink.
nēci, to be ashamed.	yari, to be ashamed.
tcīc, leaf.....	racki, leaf.
cic, nose.....	rici, nose.
kac, clam.....	kīrka, bivalve.

CHITIMACHA M—TUNICA P

tem, to kill.....	rapa, to kill.
mic, trail, road.....	pīta, to walk; pī, to go out.

[1] There is some reason to think that these words may be connected with the words meaning down, low, on the ground, in the respective languages, *ne*, *nei*, to descend, *nekup*, downward, *halu*, down, in which case the above would not necessarily be comparable.

CHITIMACHA M—TUNICA N

Chitimacha	Tunica
matc, to lead	naxca, to lead.
mi, breast (female)	nic, breast (female).
imps, horn [1]	ōnīr, horn.

CHITIMACHA N—TUNICA M

ini, to pursue	mē, to hunt.
neki, năki, grease, fat, oil.	maka, grease, fat, oil.
nūc, stone	kūmac, stone.
ne, and (with nouns)	ma, and (employed generally).

CHITIMACHA TC—TUNICA S

tcaki, cold	sapa, cold.
intci, father	si, father.
tcap, dried up	sōpū, dried up.

CHITIMACHA TC—TUNICA C

Chitimacha	Tunica
tcăm, nest	cē, nest.
tcū, to go (singular)	ci, to go (plural).
tcuc, to sew	cuxtci, to sew.
tcaix, happy	căpa, satisfied, happy.
tcīīc, caterpillar, worm.	cila, caterpillar, small creature.

CHITIMACHA C—TUNICA TC

ci, belly	tcik, belly.
cō, to drip	tcōlu, to drip.
-c, infinitive suffix	-tci, subordinating suffix.

CHITIMACHA TC—TUNICA T

utci, rotten	yōta, rotten.
tcat, river, bayou	tītik, river, bayou.

[1] See footnote, p. 53.

Illustrated by one strong example in each case are the following shifts: k–p; p–k; y–r; p–m; h–y; k–y; y–k; ts–h; n–t.

On comparing the similar forms in all three languages we find very few cases in which the same change occurs in all more than once. The following are, in fact, the only ones:

TUNICA R—CHITIMACHA AND ATAKAPA T

Tunica	Chitimacha	Atakapa
peri, to surpass	waiti, to surpass	ītī, to surpass.
hēri, canoe	hūta, canoe	tu, canoe.
era, tobacco	nēt, tobacco	tsīt, tobacco.

TUNICA L—ATAKAPA AND CHITIMACHA T

la, night	tap', dark	īti, dark; tegg (E), night.
sălax, honey locust	sit, honey locust	nīt, honey locust.

TUNICA AND ATAKAPA N—CHITIMACHA M

nic, female breast	mi, female breast	nīk, female breast.
ōnīr, horn	imps, horn	nōx, horn.

TUNICA M—CHITIMACHA AND ATAKAPA N (AND Ñ)

Tunica	Chitimacha	Atakapa
maka, grease, oil, fat	năki, neki, grease, oil, fat	eñ, grease, oil, fat.
mē, to hunt	ini, to pursue	in, to hunt.
ma, and	ne, and (between nouns)	n, and (between nouns).

TUNICA AND CHITIMACHA TC OR TS—ATAKAPA C

nuxtci, woman	kitca, woman	kic, woman.
haxtcū, salt	tsaxtsa, salt	cīck, salt.

Of 63 correspondences between consonants in all three languages 13 are between t, l, n, r, and y; 11 between s, c, ts, and tc; 4 between n, ñ, and m; and 3 between p, m, and w.

CONCLUSION

From the above data I conclude that we have in the so-called Tunican, Chitimachan, and Atakapan stocks merely widely divergent dialects of one stock. All three agree closely in structure, there being no grammatical category, and no feature of composition of any consequence in one not represented in at least one of the other two. Of 17 phonetic features exhibited by the pronouns and pronominal affixes of the three languages 14 are found to be shared in common by at least two. Of the remaining affixes more than two-thirds possessed by each language are present in at least one of the others. Of the independent stems in any way comparable we find resemblances in between one-fourth and one-third of the cases. It is not likely that all of the correspondences entered in my list would be found valid, granted more extensive information, but I believe that the number of resemblances found in such comparatively fragmentary material tells in favor of the relationship rather than against it. If the relationship is admitted, and I think it must be, we find that we now have one linguistic group formerly occupying a long, narrow terrain extending from the Gulf coast with but slight interruption as far up the Mississippi River as the northwestern counties of the State of Mississippi, and with a westerly arm almost at right angles, running along the coast of the Gulf of Mexico from the mouth of the Mississippi to Galveston Bay and inland still farther toward the west. The impression created is of a body of Indians from the west pushed east and south by the expansion of the Caddoan peoples. It remains to be seen whether the connection ends here, or whether the newly identified group is affiliated with the Muskhogean stock to the east or the smaller stocks of central and southern Texas.

In order not to complicate our nomenclature I suggest that the term Tunican, the oldest of the three in point of usage, be extended over the new stock, the three sections being known by their simple names, Tunica, Chitimacha, and Atakapa.

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